# EXR-300/XR-3500MK2

# SERVICE MANUAL

*US Model*
*Canadian Model*

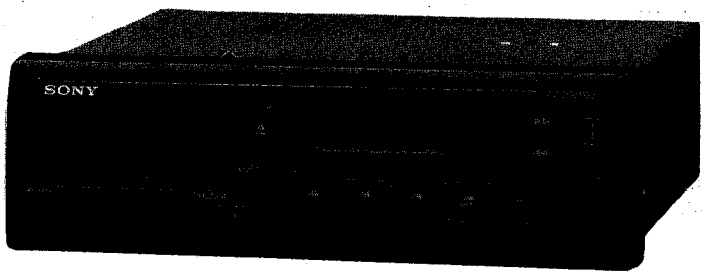


Photo : XR-3500MK2

| | |
|---|---|
| Model Name Using Similar Mechanism | XR-3500 |
| Tape Transport Mechanism Type | MG-36SZ6-32 |

**SPECIFICATIONS**

## AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
7 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

### Other Specifications

### Cassette player section

| | |
|---|---|
| Tape track | 4-track 2-channel stereo |
| Wow and flutter | 0.13 % (WRMS) |
| Frequency response | 30 – 15,000 Hz |
| Signal-to- noise ratio | 55 dB |

### Tuner section

**FM**

| | |
|---|---|
| Tuning range | 87.5 – 107.9 MHz |
| Antenna terminal | External antenna connector |
| Intermediate frequency | 10.7 MHz |
| Usable sensitivity | 12 dBf |
| Selectivity | 70 dB at 400 kHz |
| Signal-to-noise ratio | 65 dB (stereo), 68 dB (mono) |
| Harmonic distortion at 1 kHz | 0.5% (stereo), 0.3% (mono) |
| Separation | 35 dB at 1 kHz |
| Frequency response | 30 – 15,000 Hz |
| Capture ratio | 2 dB |

**AM**

| | |
|---|---|
| Tuning range | 530 – 1,710 kHz |
| Antenna terminal | External antenna connector |
| Intermediate frequency | 450 kHz |
| Sensitivity | 30 µV |

### Power amplifier section

| | |
|---|---|
| Outputs | Speaker outputs (sure seal connectors) |
| Speaker impedance | 4 – 8 ohms |
| Maximum power output | EXR-300 : 15W × 4 (at 4 ohms) XR-3500MK2 : 20W × 4 (at 4 ohms) |

### General

| | |
|---|---|
| Output lead | Power antenna relay control lead<br>Power amplifier control lead |
| Tone controls | Bass ±8 dB at 100 Hz<br>Treble ±8 dB at 10 kHz |
| Power requirements | 12 V DC car battery (negative ground) |
| Dimensions | Approx. 186 × 57 × 170 mm ($7\frac{3}{8} \times 2\frac{1}{4} \times 6\frac{3}{4}$ in.) (w/h/d) not incl. projecting parts and controls |

—Continued on next page—

MICROFILM

FM/AM CASSETTE CAR STEREO

SONY®

| | |
|---|---|
| Mounting dimension | Approx. 182 × 53 × 155 mm (7 1/4 × 2 1/8 × 6 1/8 in.) (w/h/d) not incl. projecting parts and controls |
| Mass | Approx. 1.2 kg (2 lb 10 oz.) |
| Supplied accessories | Parts for installation and connections (1 set)<br>Front panel case (1) |

*Design and specifications are subject to change without notice.*

### Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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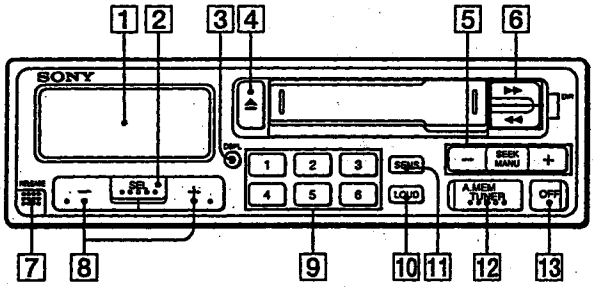
## Button Locations




Refer to the pages in ● for details.

1 Display window
2 SEL (control mode select) button ❺❽
3 DSPL (display mode change/time set) button ❺
4 ⏏ (eject) button ❺
5 SEEK/MANU button ❻❼
6 ◀◀/▶▶ (fast winding)/DIR (tape transport direction change) buttons ❺❻
7 RELEASE (front panel release) button ❹❽
8 [.−] [+.] (volume/bass/treble/balance/fader control) buttons ❺❽
9 During radio reception: Preset number buttons ❼
10 LOUD (loudness) button ❽
11 SENS (sensitivity adjust) button ❻
12 TUNER/A.MEM (radio on • band select/automatic memory) button ❻❼
13 OFF button ❹



## Setting the Clock

The clock has a 12-hour digital indication.

For example, setting it to 10:08

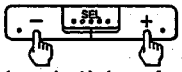
**1** Display the time.

(Press the DSPL ⏲ button during unit operation.)

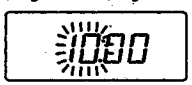
**2** Press the DSPL ⏲ button for more than two seconds.

The hour digit(s) blinks.

Set the hour digits.



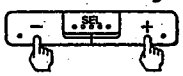
(to go back) (to go forward)



**3** Press the SEL button momentarily.

The minute digits blink.

Set the minute digits.



(to go back) (to go forward)

**4** Press the DSPL ⏲ button momentarily.

The clock activates.

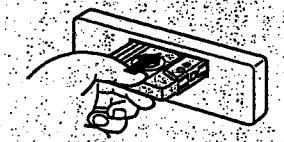
***Note***

*The clock cannot be set unless the power is turned on. Set the clock after you turn on the radio, or during tape playback.*

# Cassette Player Operation

## Listening to Tape Playback

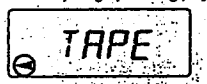
**After inserting the cassette, playback will start automatically.**



**To change the tape direction,** press both the ◀◀ and the ▶▶ buttons at the same time.

*Indication of Tape Transport Direction*

*The side facing up is being played.*




*The side facing down is being played.*

**Tape playback automatically changes direction at the end of the tape.**

***Note***

*Before turning off the unit, eject the tape to avoid tape damage.*

## Ejecting the Cassette

Press the ⏏ button to stop playback and eject the cassette.



This section is extracted from EXR-300's instruction manual.

## Fast-winding the Tape

| Direction Indicator* | To advance | To rewind |
|---|---|---|
| ► | | |
| ◄ | | |

To resume playback, press the other fast-winding button partially until the locked button is released.

** The ◄ or ► indicator will flash while fast-winding the tape.*

# Radio Reception

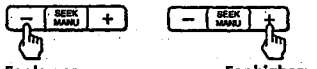
## Searching for Stations Automatically

— Automatic Tuning

**1 Select the desired band.**

FM1 → FM2 → FM3 → AM1 → AM2 → FM1

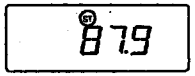
**2 Press either side of the SEEK/MANU button momentarily to search for the next station (automatic tuning).**



For lower frequencies — For higher frequencies

The scanning stops when a station is received. Press either side of the button repeatedly until the desired station is received.

***When an FM stereo program with a sufficient signal strength is tuned in,***



*the "ST" indication will appear.*

***To avoid the automatic tuning from stopping on stations too frequently (local seek mode), press the SENS button momentarily to get the "LCL" indication.***
*Only the stations with relatively strong signals will be tuned in. The local seek mode functions only when the automatic tuning is in operation.*

## If FM Stereo Reception is Poor — Monaural Mode

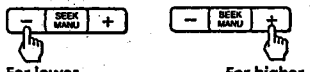
**Press the SENS button momentarily. → "MONO" appears on the display.**
The sound will improve, but it will become monaural.

## Tuning in by Adjusting the Frequency — Manual Tuning

**1 Select the desired band.**

FM1 → FM2 → FM3 → AM1 → AM2 → FM1

**2 Press and hold either side of the SEEK/MANU button.**
Release the button when the desired station is received.



For lower frequencies — For higher frequencies

**PREVENT ACCIDENTS!**
When tuning in during driving, use the automatic tuning and the memory preset tuning instead of the manual tuning.

## Memorizing Stations Automatically

— Automatic Memory Function

Stations with the clearest reception are automatically searched and memorized on each band (FM1, FM2, FM3, AM1 and AM2). Up to 6 stations on each band can be stored on the preset number buttons 1 to 6 in the order of band frequency.

**1 Select the desired band.**

FM1 → FM2 → FM3 → AM1 → AM2 → FM1

**2 Press the TUNER/A.MEM button for more than two seconds.**

The unit will be start scanning the selected band and memorizes the tuned stations on the preset number button 1 through 6 automatically.

## Memorizing Only the Desired Stations

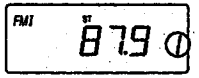
**1 Select the desired band.**

FM1 → FM2 → FM3 → AM1 → AM2 → FM1

**2 Tune in the station which you wish to store on the preset number button.**

**3 Press and hold the desired preset number button ( 1 to 6 ) for about two seconds until you hear a beep tone.**

The number of the pressed preset number button appears in the display window.



*Up to 6 stations on each band (FM1, FM2, FM3, AM1 and AM2) can be stored on the preset number buttons in the order of your choice. Therefore, 18 stations can be memorized on FM.*
*If you try to store another station on the same preset number button, the previously stored station will be erased.*

## Receiving the Memorized Stations

**1 Select the desired band.**

FM1 → FM2 → FM3 → AM1 → AM2 → FM1

**2 Press momentarily the preset number button ( 1 to 6 ) on which the desired station is stored.**

***Note***
*If you press the preset number button for more than two seconds, the currently received station will be memorized. To receive the previously memorized station, make sure that the preset number button is pressed only momentarily.*

# Other Functions

## Adjusting the Sound Characteristics

**1 Select the item you want to adjust by pressing the [SEL] button repeatedly.**

VOL (volume) → BAS (bass) → TRE (treble) → BAL (balance) → FAD (fader) → VOL (volume)

**2 Adjust the selected item by pressing either the [−] or [+] button.**

Adjust within three seconds after selecting. (After three seconds the button will again serve as volume control button.)

## Enjoying Bass and Treble at Low Volume

— Loudness Function

**Press the [LOUD] button. → "LOUD" will appear on the display.**
Bass and treble will be boosted. To cancel, press again.

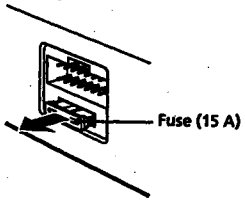
## Muting the Beep Tone

**Press the [5] button while pressing the [SEL] button.**
To reactivate the beep tone, press these buttons once more.

## Maintenance

### Fuse Replacement

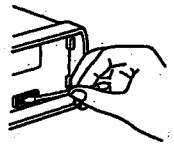
When replacing the fuse, be sure to use one matching the amperage rating stated on the fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.




**Warning**
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

### Cleaning the Connectors

The unit may not function properly if the connectors between the unit and the front panel are not clean. In order to prevent this, open the front panel by pressing the RELEASE button, then detach it and clean with a cotton swab dipped in alcohol. Do not apply too much force. Otherwise, the connector may get damaged.


Main unit

Back of the front panel

# Connections

## Caution

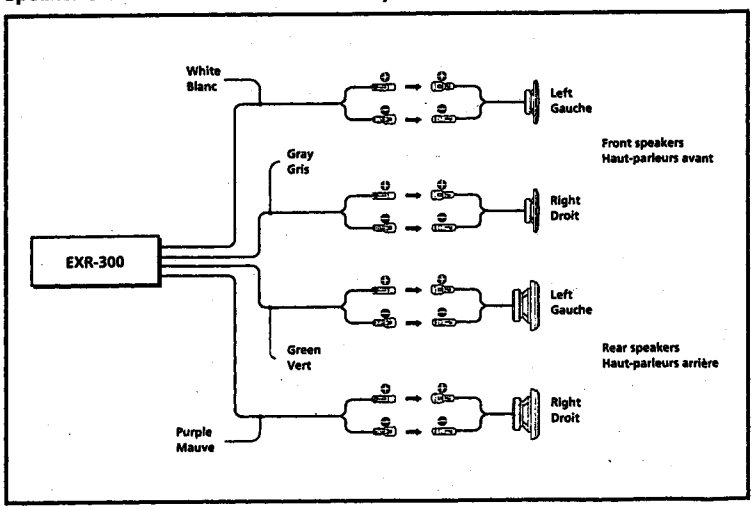
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the yellow and red power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common ground point.

# Connexions

## Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant d'effectuer les raccordements, débranchez la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Raccordez les fils jaune et rouge d'alimentation uniquement après avoir réalisé toutes les autres connexions.
- Raccordez le fil d'alimentation rouge à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoire.
- Rassemblez tous les fils de terre en un point de masse commun.

## Speaker Connection/Connexion des haut-parleurs



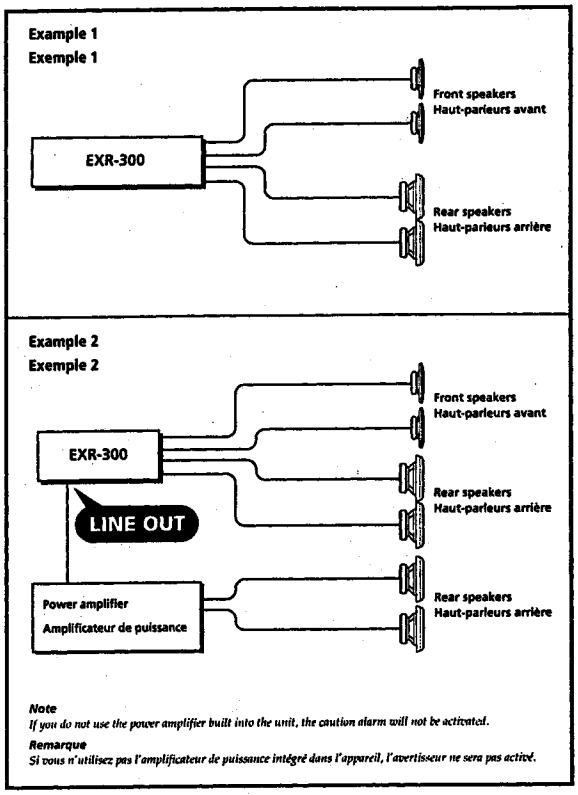

***Notes on speaker connection***

- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

***Remarques sur la connexion des haut-parleurs***

- *Utiliser des haut-parleurs avec une impédance de 4 à 8 ohms et qui peuvent supporter l'alimentation fournie sinon ils risquent d'être endommagés.*
- *Ne pas connecter les bornes du système de haut-parleur au châssis de la voiture et ne pas raccorder les bornes du haut-parleur droit aux bornes du haut-parleur gauche.*
- *Ne pas essayer de connecter les haut-parleurs en parallèle.*
- *Ne pas connector d'enceintes acoustiques actives (avec amplificateurs intégrés) aux bornes: d'enceinte de cet appareil, pour éviter d'endommager les enceintes. Veiller à raccorder des enceintes passives.*

## Connection Diagram/Schéma de connexion



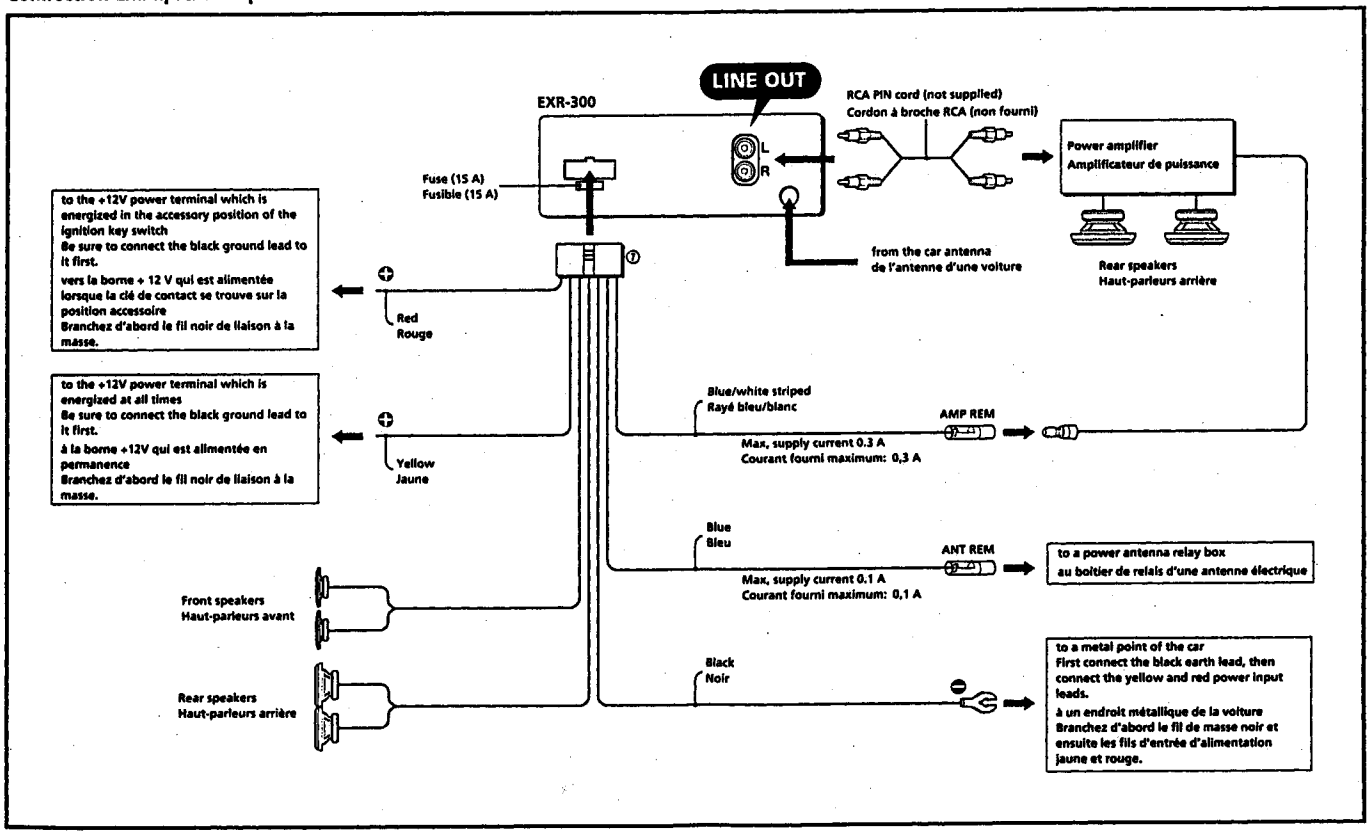

***Note***

*If you do not use the power amplifier built into the unit, the caution alarm will not be activated.*

***Remarque***

*Si vous n'utilisez pas l'amplificateur de puissance intégré dans l'appareil, l'avertisseur ne sera pas activé.*

## Connection Example/Exemple de Connexion


LINE OUT
EXR-300
RCA PIN cord (not supplied)
Cordon à broche RCA (non fourni)
Power amplifier
Amplificateur de puissance
Fuse (15 A)
Fusible (15 A)
L
R
from the car antenna
de l'antenne d'une voiture
Rear speakers
Haut-parleurs arrière
to the +12V power terminal which is energized in the accessory position of the ignition key switch
Be sure to connect the black ground lead to it first.
vers la borne + 12 V qui est alimentée lorsque la clé de contact se trouve sur la position accessoire
Branchez d'abord le fil noir de liaison à la masse.
Red
Rouge
to the +12V power terminal which is energized at all times
Be sure to connect the black ground lead to it first.
à la borne +12V qui est alimentée en permanence
Branchez d'abord le fil noir de liaison à la masse.
Yellow
Jaune
Blue/white striped
Rayé bleu/blanc
AMP REM
Max. supply current 0.3 A
Courant fourni maximum: 0,3 A
Blue
Bleu
ANT REM
Max. supply current 0.1 A
Courant fourni maximum: 0,1 A
to a power antenna relay box
au boîtier de relais d'une antenne électrique
Front speakers
Haut-parleurs avant
Rear speakers
Haut-parleurs arrière
Black
Noir
to a metal point of the car
First connect the black earth lead, then connect the yellow and red power input leads.
à un endroit métallique de la voiture
Branchez d'abord le fil de masse noir et ensuite les fils d'entrée d'alimentation jaune et rouge.

***Notes on the control leads***

- *The power antenna control lead (blue) supplies 12 V DC when you turn on the unit.*
- *A power antenna without relay box cannot be used with this unit.*

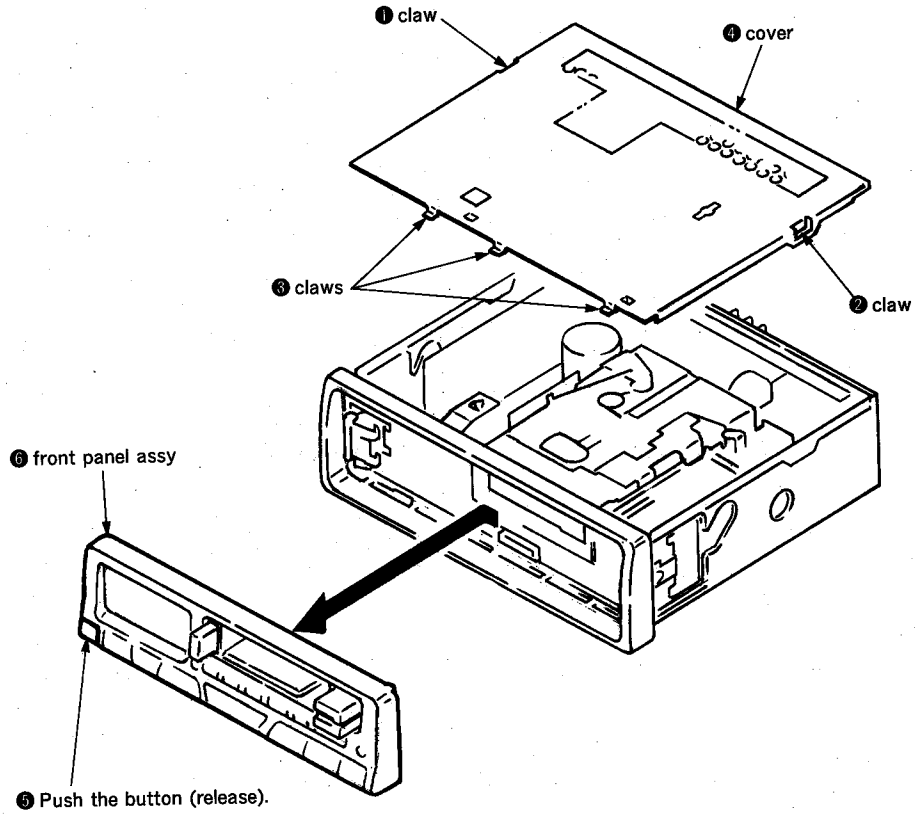
***Remarques sur les fils de contrôle***

- *Le fil de contrôle de l'antenne électrique (bleu) fournit du courant continu de 12 V lorsque vous mettez l'appareil sous tension.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

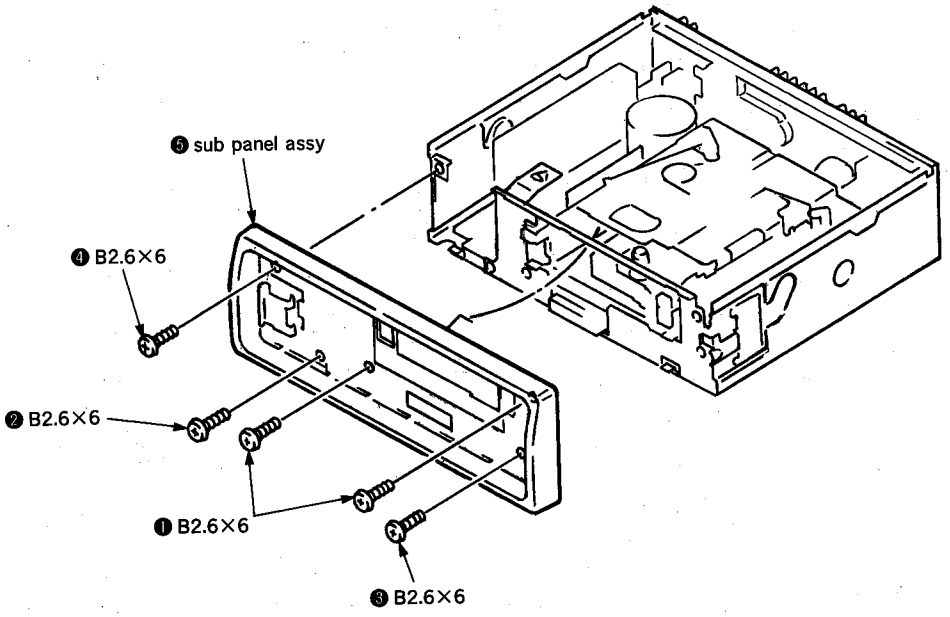
# SECTION 2
# DISASSEMBLY

**Note :** Follow the disassembly procedure in the numerical order given.

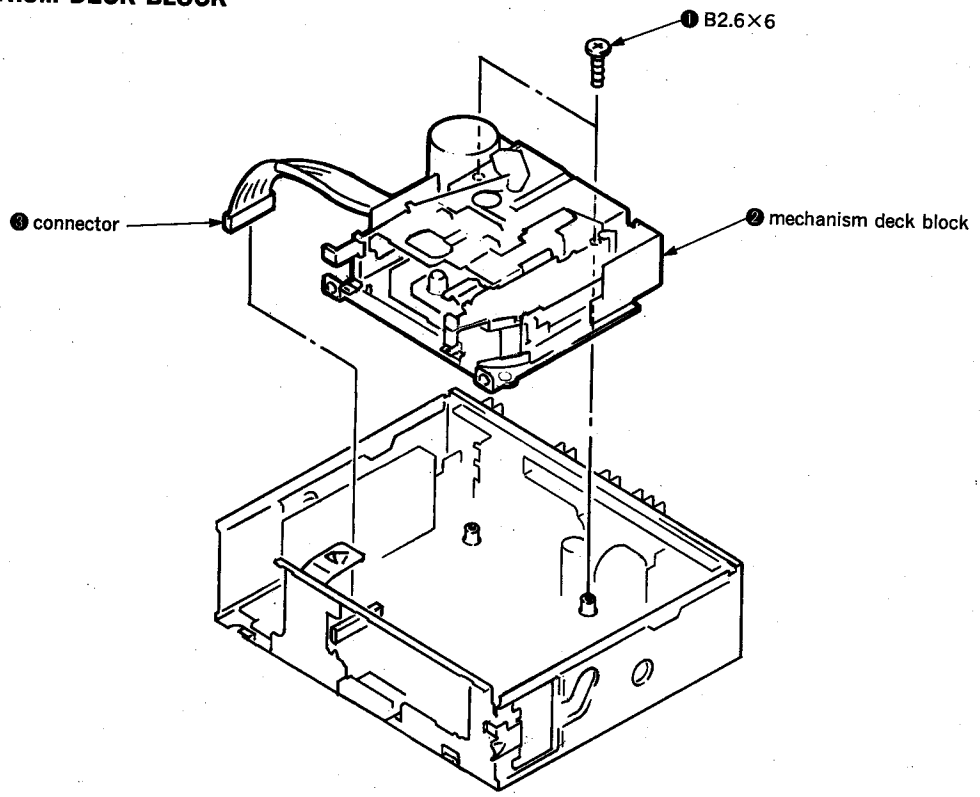
## 2-1. COVER



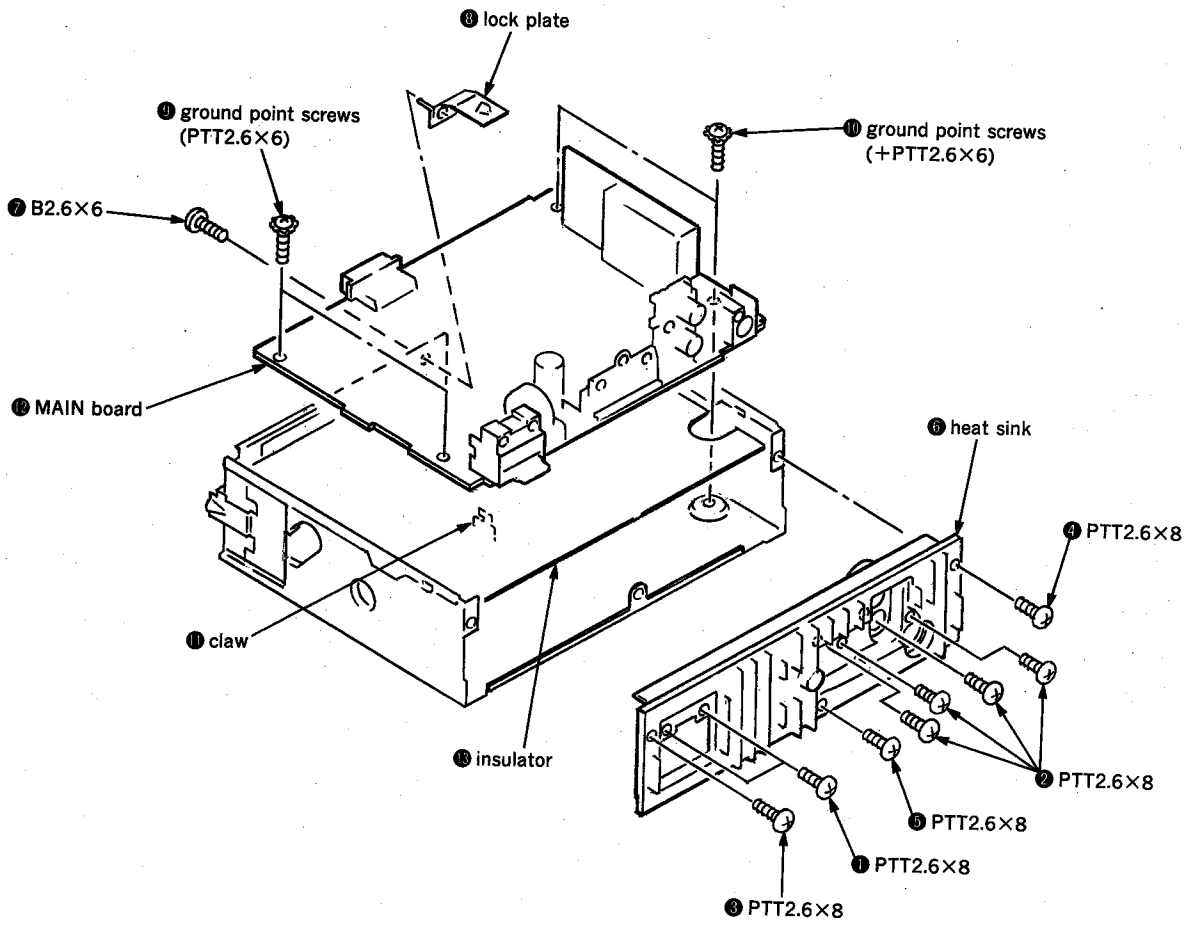

## 2-2. SUB PANEL ASSY



## 2-3. MECHANISM DECK BLOCK




## 2-4. MAIN BOARD



# SECTION 3
# MECHANICAL ADJUSTMENTS

### PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment:
   PB head — Pinch roller
   Idler — Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

### Torque Measurement

| Mode | Torque Meter | Meter Reading |
|---|---|---|
| FWD | CQ-102C | 25−55g•cm (0.35−0.76 oz•inch) |
| FWD Back Tension | | 1.5−4.0g•cm (0.02−0.05 oz•inch) |
| REV | CQ-102RC | 25−55g•cm (0.35−0.76 oz•inch) |
| REV Back Tension | | 1.5−4.0g•cm (0.02−0.05 oz•inch) |
| FF, REW | CQ-201B | more than 50g•cm (more than 0.70oz•inch) |

# SECTION 4
# ELECTRICAL ADJUSTMENTS

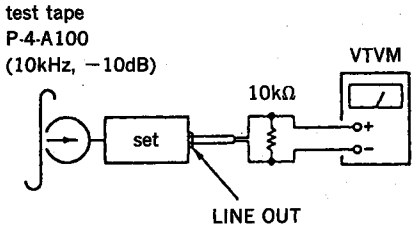
See the adjustment location from on page 12 and 13 for the adjustment.

**DECK SECTION** | **0dB=0.775V**

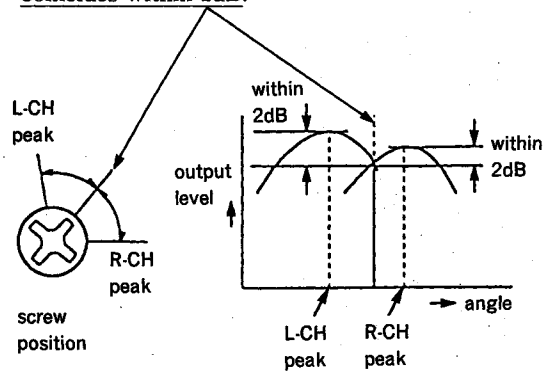
### PB Head Azimuth Adjustment

**Procedure:**

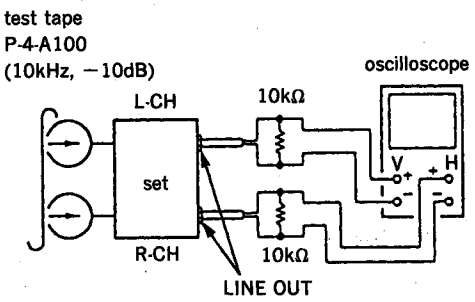
1. Put the set into the FWD PB mode.

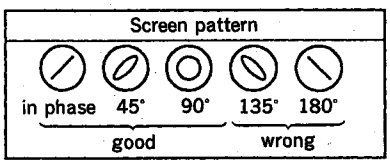



2. Turn the screw and check the output peak value. Adjust the screw so that the peak value in channels L and R coincides within 2dB.



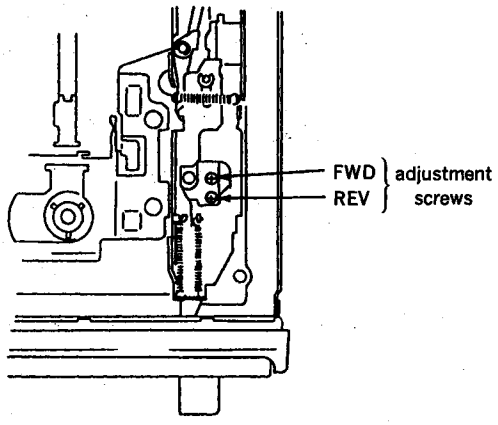

3. Check the phase in the PB mode.




4. Repeat the above adjustment for the REV PB mode.

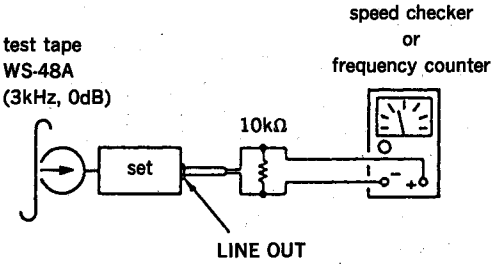
**Adjustment Location:** PB head



## Capstan Motor Tape Speed Adjustment

**Procedure :**

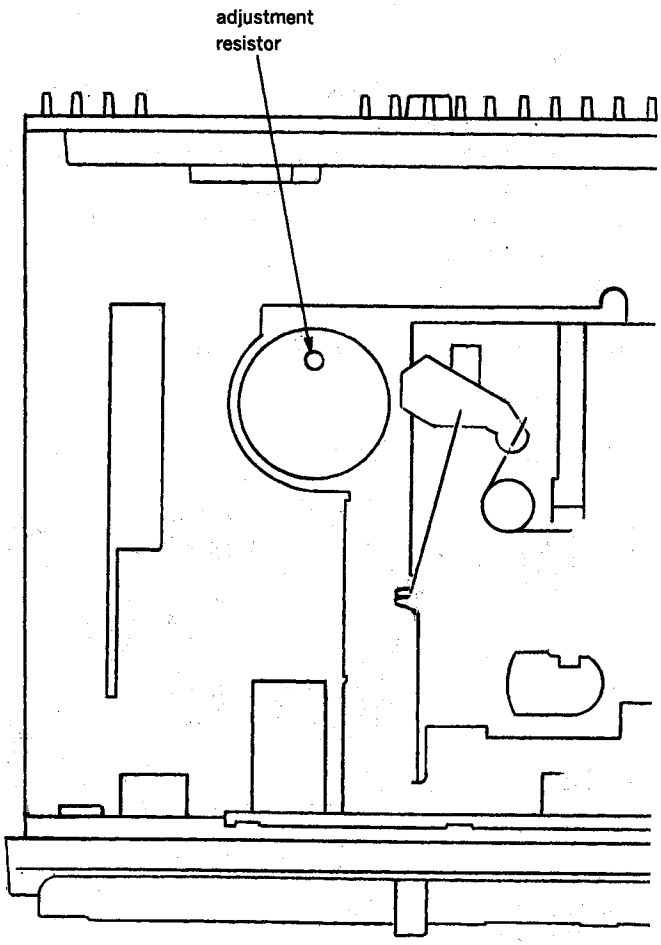
1. Put the set into the FWD PB mode.




**Specification :** Constant speed

| Speed checker | Frequency counter |
|---|---|
| −2.0 to +3.0% | 2,940 to 3,090Hz |

**Adjustment Location :**




## TUNER SECTION | 0dB=1μV

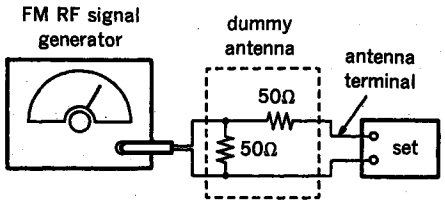
**Cautions during repair**
When the front end is defective, replace it by a new one because its internal block is difficult to repair.

## FM SEEK Stop Adjustment

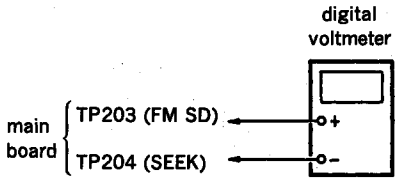
**Note :** Be sure to perform this adjustment before "AM SEEK Stop Adjustment".

**Setting :**

TUNER button : FM I




Carrier frequency : 97.9MHz
Output level : 22dB (12.6μV)
Mode : mono
Modulation : 1kHz, 22.5kHz deviation (30%)




**Procedure :**

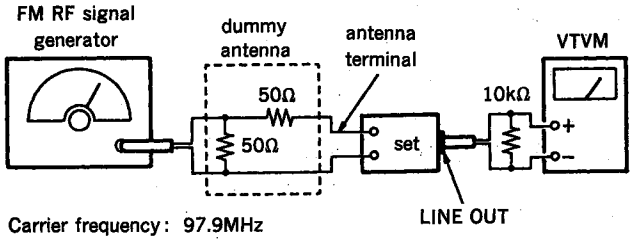
1. Short the jumper wire between TP204 and Q610 emitter (+5V). (See page 13.)
2. Adjust VR103 so that the reading on the digital voltmeter changes point from low to high.
3. After adjustment is completed remove the jumper wire.

**Adjustment Location :** See page 12 and 13.

## FM Noise Focus Adjustment

**Setting :**

TUNER button : FM I




Carrier frequency : 97.9MHz
Output level : 60dB (1mV)
Mode : mono
Modulation : 1kHz, 75kHz deviation

**Procedure :**

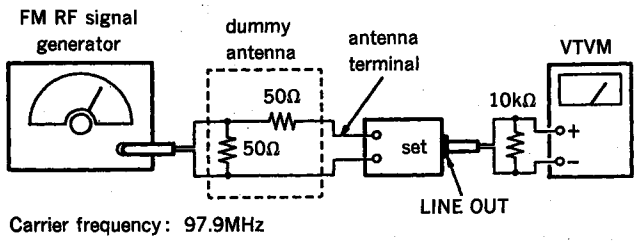
1. Tune the 97.9MHz.
2. The then output level is supposing that (A) dB.
3. Adjust with the volume VR102 on TU1 so that the output level is (A)−31dB then signal generator input set to −20dB.

**Adjustment Location :** tuner unit (TU1)

## FM Stereo Separation Adjustment

**Setting :**

TUNER button : FM I




Carrier frequency : 97.9MHz
Output level : 70dB (3.2mV)
Mode : stereo
Modulation : main : 1kHz, 33.75kHz deviation (45%)
sub : 1kHz, 33.75kHz deviation (45%)
pilot : 1kHz, 7.5kHz deviation (10%)

**Procedure :**

| FM stereo signal generator output channel | VTVM connection | VTVM reading (dB) |
|---|---|---|
| L-CH | L-CH | Ⓐ |
| R-CH | L-CH | Ⓑ Adjust VR101 on TU1 for minimum reading. |
| R-CH | R-CH | Ⓒ |
| L-CH | R-CH | Ⓓ Adjust VR101 on TU1 for minimum reading. |

L-CH Stereo separation : Ⓐ−Ⓑ
R-CH Stereo separation : Ⓒ−Ⓓ
The separations of both channels should be equal.

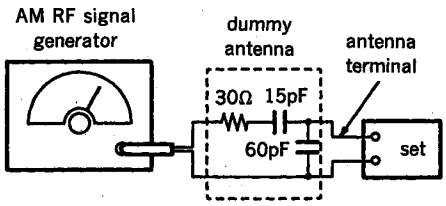
**Specification :** Separation more than 27dB

**Adjustment Location :** tuner unit (TU1)

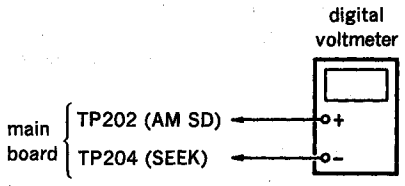
## AM SEEK Stop Adjustment

**Setting :**

TUNER button : AM




Carrier frequency : 1,000kHz
Output level : 33dB (44.7μV)
Modulation : no modulation

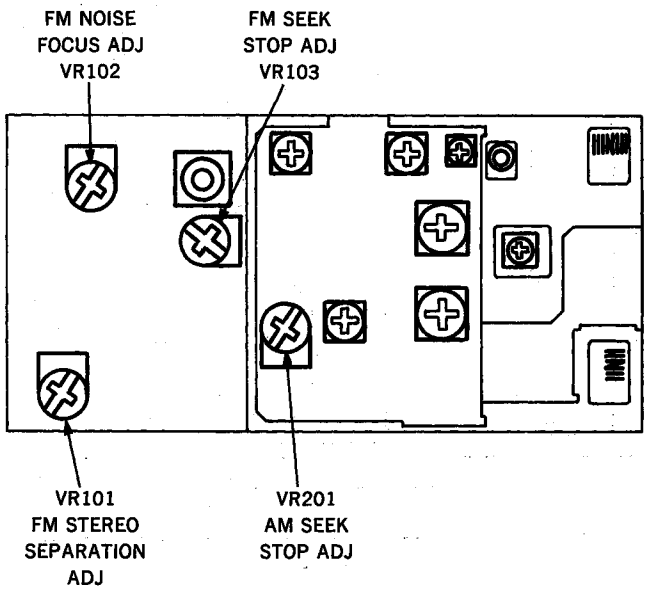



**Procedure :**

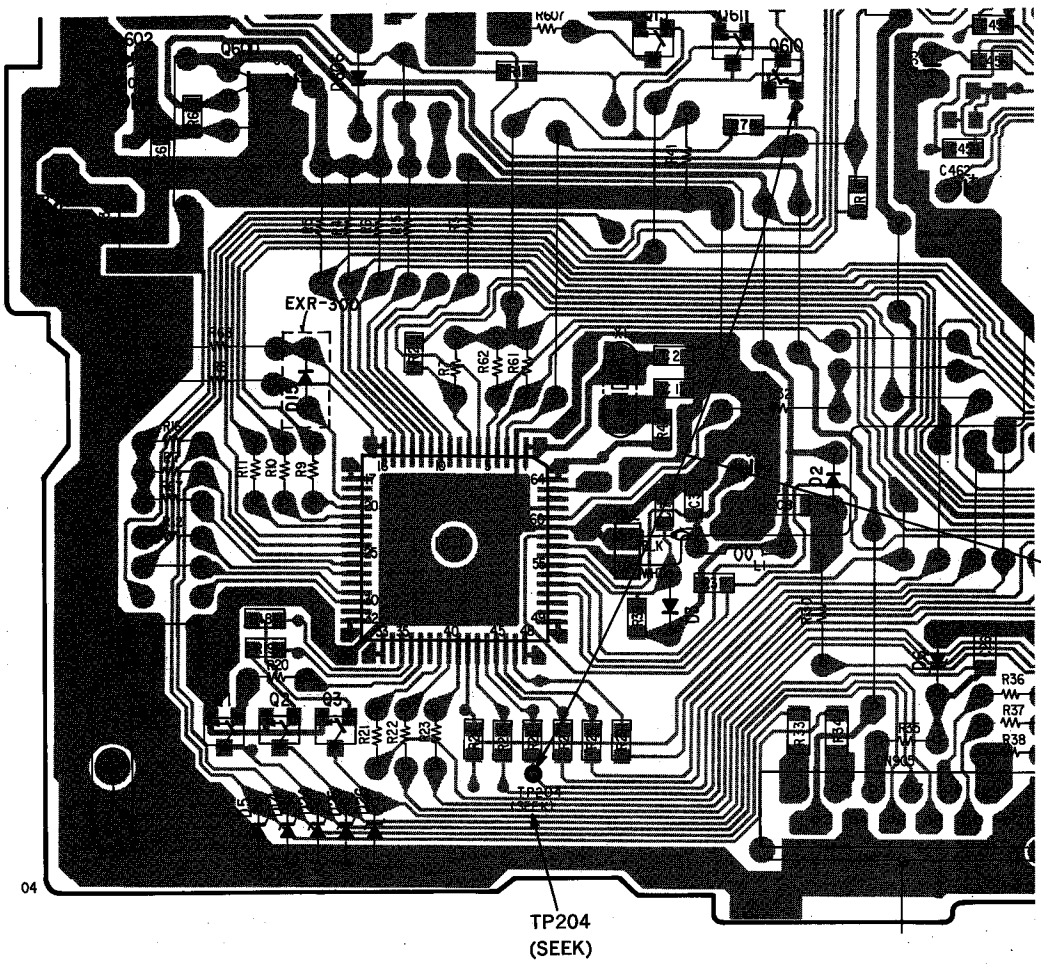
1. Short the jumper wire between TP204 and Q610 emitter (+5V). (See page 13.)
2. Adjust VR201 so that the reading on the digital voltmeter changes point from low to high.
3. After adjustment is completed remove the jumper wire.

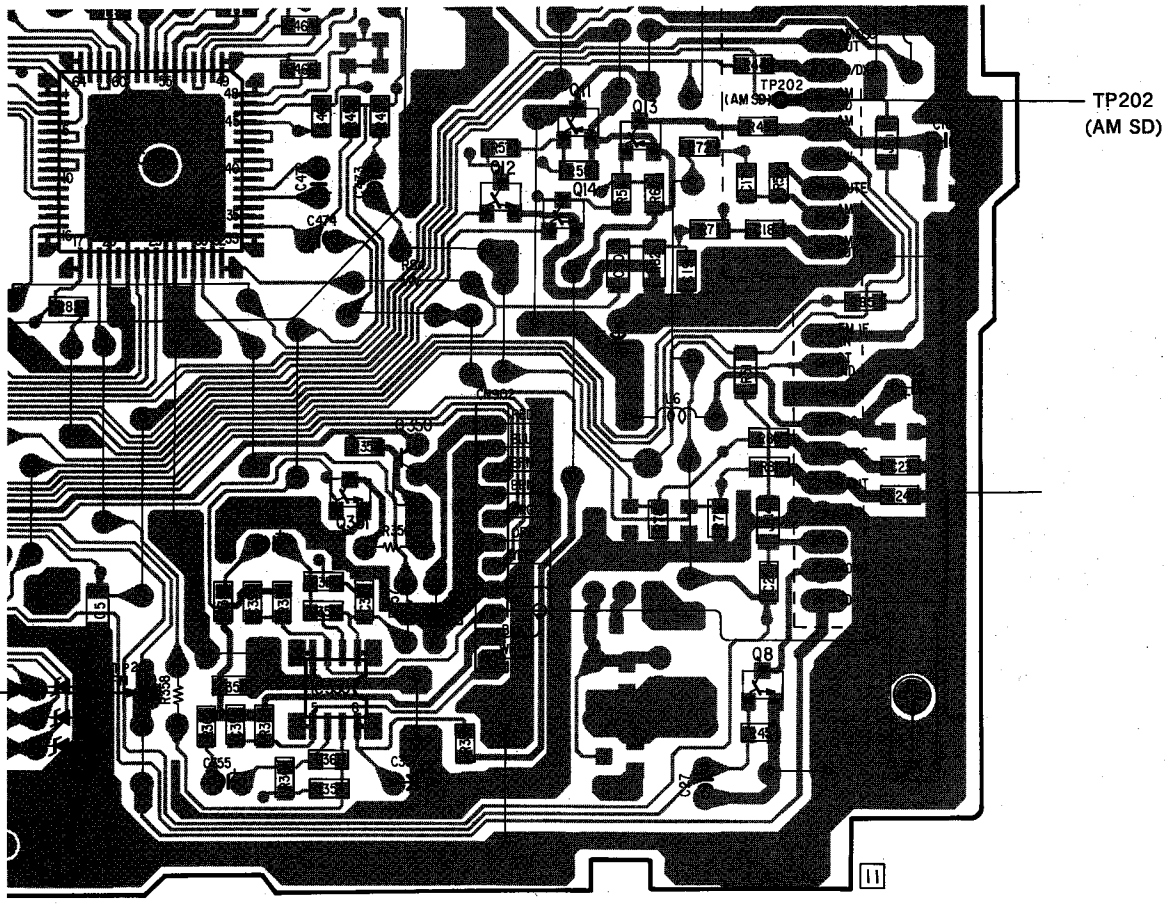
**Adjustment Location :** tuner unit (TU1)

**Adjustment Location :** tuner unit (component side)



**Measurement Point Location :** main board (conductor side)



# SECTION 5
# DIAGRAMS

## 5-1. IC PIN DESCRIPTION

### • IC1 LC7233N-9206 (System Control)

| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 1 | X IN | I | Connect to crystal.(4.5MHz) |
| 2 | — | — | Connect to GND. |
| 3 | $\overline{\text{ILL IN}}$ | I | At ILL IN : Low input |
| 4 | AM SD | I | At with AM SD : High input |
| 5 | FM SD | I | At with FM SD : High input |
| 6 | $\overline{\text{STEREO}}$ | I | At STEREO : Low input |
| 7 | MOTOR | O | Reel/capstan motor control terminal. At MOTOR-ON : High output |
| 8 | — | — | Not used. |
| 9 | BEEP | O | For piezoelectric buzzer output terminal |
| 10 | POWER ON | — | Not used. |
| 11 | ILL ON | O | At ACC-ON : High output,at ACC-OFF : Low output |
| 12 | N/R | I | NORMAL/$\overline{\text{REVERSE}}$ input terminal |
| 13 | FF/REW | I | At TAPE : High input, at RADIO : Low input |
| 14 | TAPE IN | I | At TAPE IN : Low input |
| 15 | K1 | I | Diode matrix input (EXR-300 only) |
| 16 | K0 | I | Diode matrix input |
| 17, 18 | T2, T1 | — | Not used. |
| 19 | T0 | O | Diode matrix output (EXR-300 only) |
| 20 | VOL CE | O | Chip Enable output terminal to ELECTRONIC VOLUME IC (IC450). |
| 21 | VOL DI | O | Data output terminal to ELECTRONIC VOLUME IC (IC450). |
| 22 | VOL CL | O | Clock output terminal to ELECTRONIC VOLUME IC (IC450). |
| 23 | MUTE REQ | I | At ACC-OFF : High input |
| 24 | PANEL IN | I | At Detachable IN : Low input,at Detachable OUT : High input |
| 25 | BAND KEY | I | At TUNER-ON : Low input |
| 26 | RADIO | I | RADIO signal input terminal |
| 27 | MUTE | O | Audio mute output terminal |
| 28 | — | — | Not used. |
| 29 | AMP MUTE | O | Power amplifier mute output terminal |
| 30 | ANT ON | — | Not used. |
| 31—34 | — | — | Not used. |
| 35—37 | KS2—KS0 | O | Key matrix output |
| 38 | — | — | Not used. |
| 39 | LCD DATA | O | Data output terminal to LCD drive IC (IC900). |
| 40 | LCD CLK | O | Clock output terminal to LCD drive IC (IC900). |
| 41 | LCD CE | O | Chip Enable output terminal to LCD drive IC (IC900). |
| 42 | AM | O | At AM : High output |
| 43 | MONO | O | At Monaural : High output |
| 44 | SEEK | O | At SEEK : Low output |
| 45 | MW/LW | O | At MW : High output,at LW : Low output |
| 46 | LOCAL/DX | O | At STEREO LOCAL : High output, at STEREO DX or MONO DX : Low output |
| 47 | FM ON | O | At FM : High output, at AM : Low output |
| 48 | TUNER ON | — | Not used. |
| 49—51 | — | — | Not used. |
| 52 | CE | I | Chip Enable input terminal |
| 53 | KEY IN | I | Key matrix signal input terminal |

| Pin No. | Pin Name | I/O | Pin Description |
|---|---|---|---|
| 54 | IF IN | I | FM/AM IF input terminal |
| 55 | BU CHECK | I | Back-up voltage detection terminal |
| 56 | VDD | — | Power supply terminal (+5V) |
| 57 | FM IN | I | FM local OSC input terminal |
| 58 | AM IN | I | AM local OSC input terminal |
| 59 | GND | — | GND |
| 60 | EO | O | Phase comparator output terminal |
| 61 | LPF IN | — | Connect to GND. |
| 62 | LPF OUT | — | Not used. |
| 63 | — | — | Not used. |
| 64 | X OUT | O | Connect to crystal.(4.5MHz) |

## 5-2. PRINTED WIRING BOARDS—MAIN SECTI

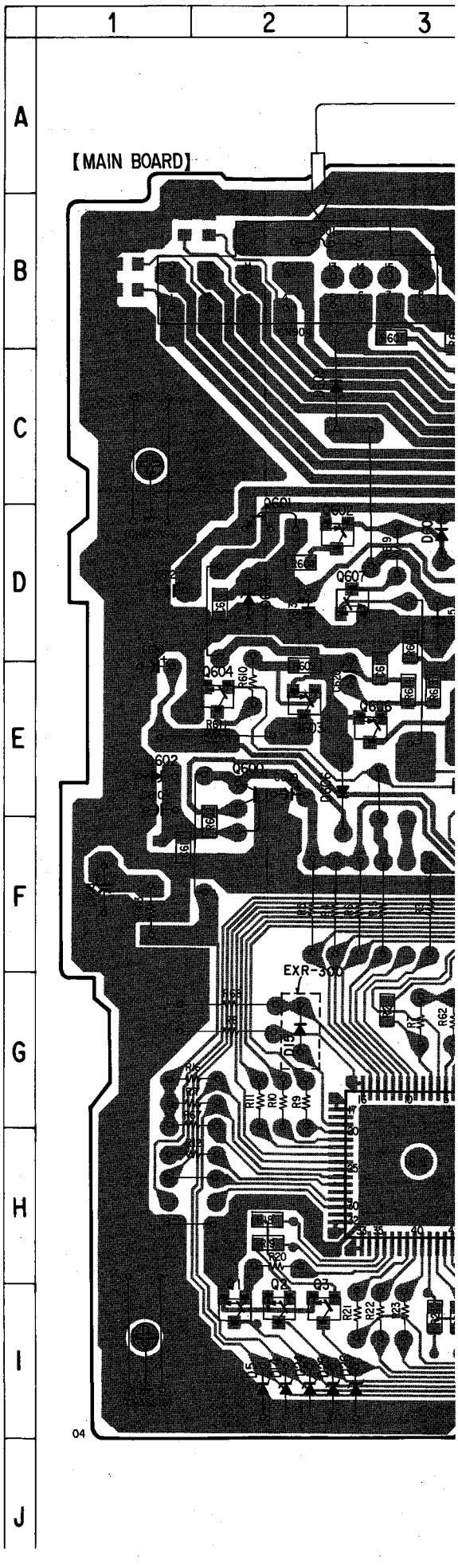
### • Semiconductor Location

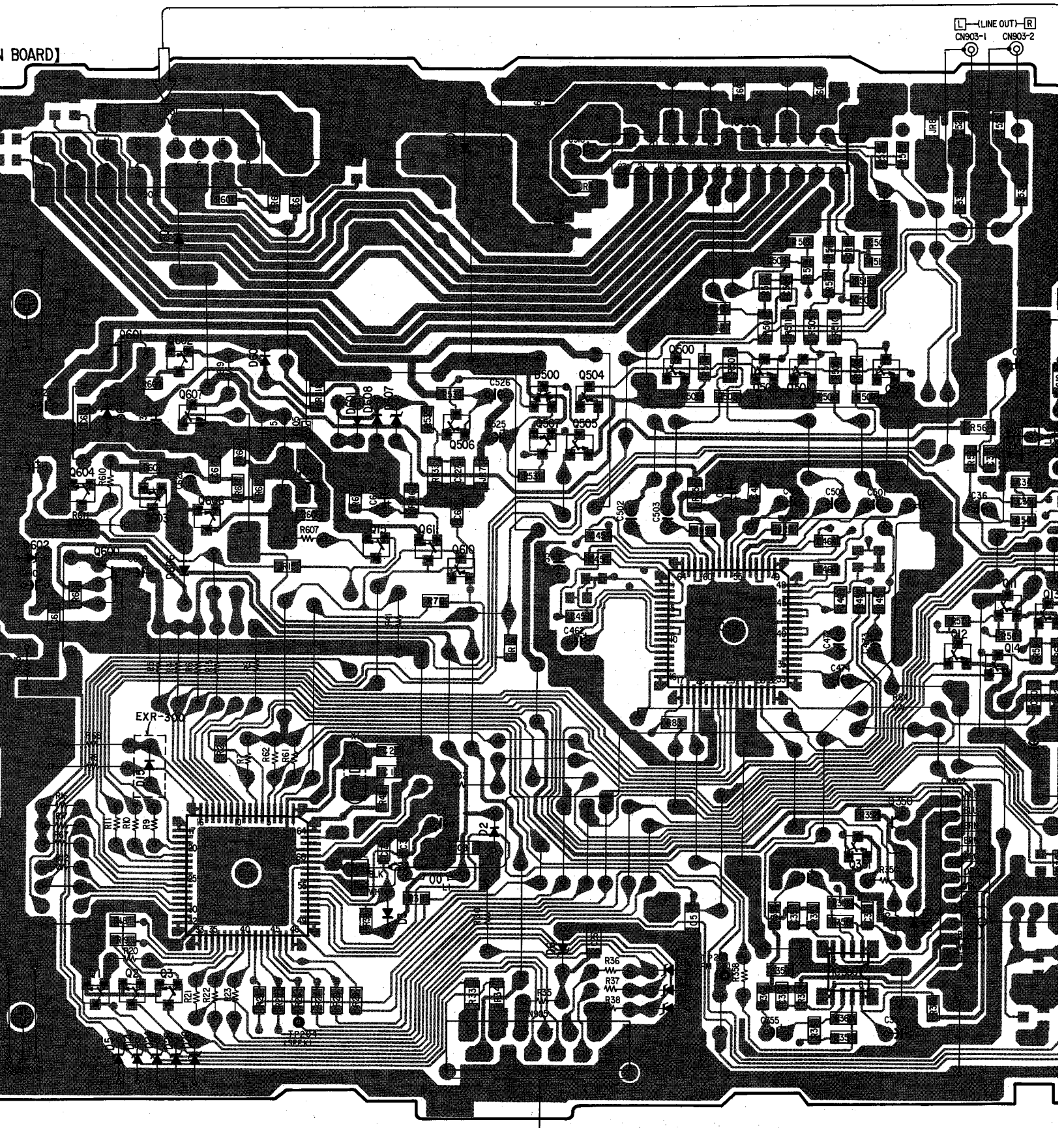
| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D2 | G-5 | Q2 | I-2 |
| D3 | H-4 | Q3 | I-2 |
| D5 | I-2 | Q5 | D-10 |
| D6 | H-5 | Q8 | H-10 |
| D10 | H-6 | Q9 | E-10 |
| D11 | I-6 | Q10 | E-9 |
| D12 | I-6 | Q11 | F-9 |
| D14 | I-2 | Q12 | F-9 |
| (D15) | G-2 | Q13 | F-9 |
| D24 | I-2 | Q14 | F-9 |
| D25 | I-2 | Q15 | E-4 |
| D26 | I-3 | Q350 | G-8 |
| D51 | E-11 | Q351 | G-8 |
| D52 | E-11 | Q500 | D-6 |
| D350 | H-8 | Q501 | D-7 |
| D500 | D-5 | Q502 | D-8 |
| D600 | B-5 | Q503 | D-7 |
| D601 | D-4 | Q504 | D-6 |
| D602 | E-1 | Q505 | D-6 |
| D603 | D-2 | Q506 | D-5 |
| D604 | D-3 | Q507 | D-5 |
| D605 | C-2 | Q600 | E-2 |
| D606 | E-2 | Q601 | D-2 |
| D607 | D-4 | Q602 | D-2 |
| D608 | D-4 | Q603 | E-2 |
| | | Q604 | E-2 |
| IC1 | H-3 | Q605 | E-3 |
| IC350 | H-8 | Q606 | E-3 |
| IC450 | F-7 | Q607 | D-3 |
| IC500 | B-7 | Q610 | E-5 |
| | | Q611 | E-4 |
| Q1 | I-2 | | |

( ): EXR-300 only

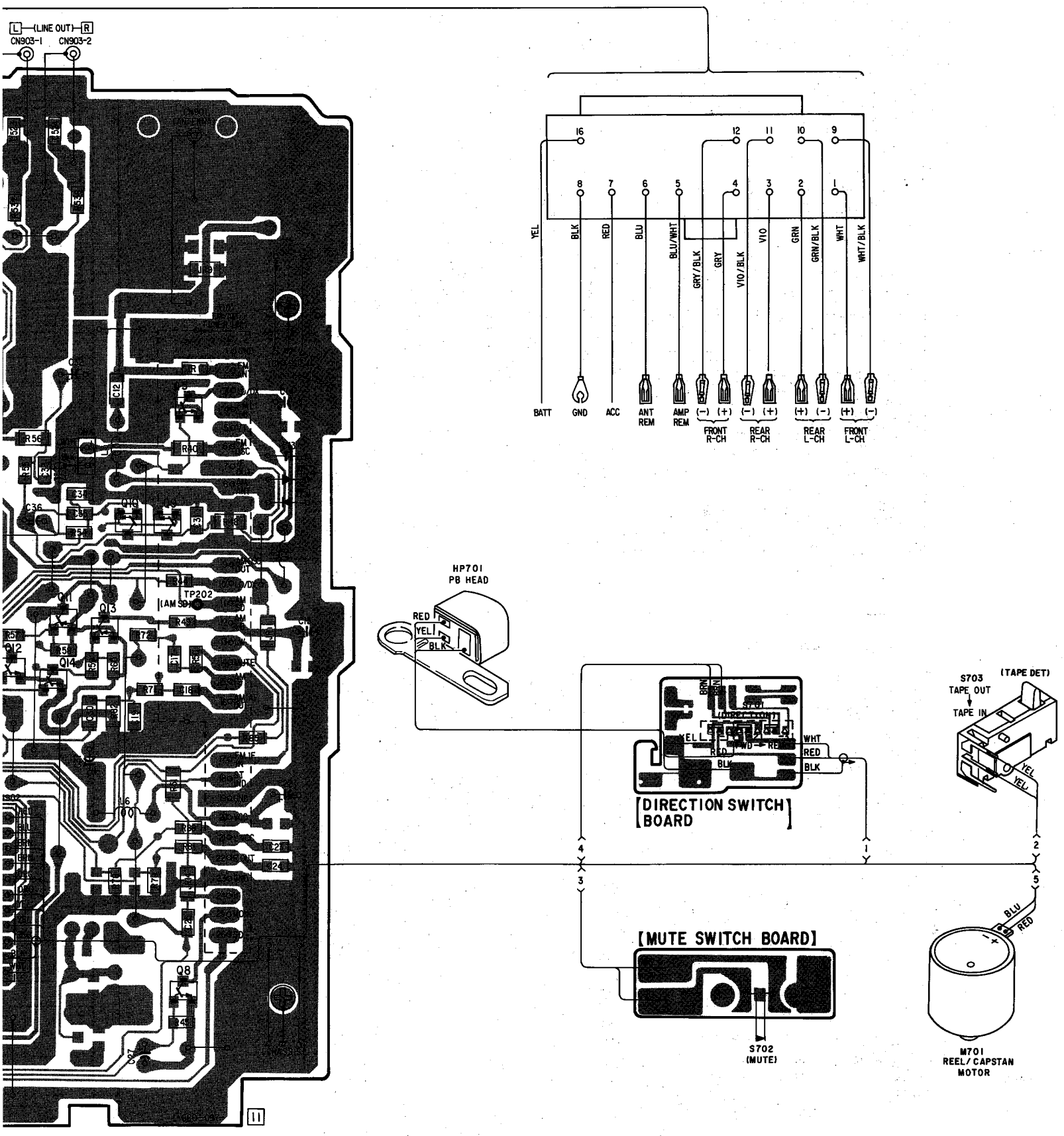
**Note :**

- o— : parts extracted from the component side.
- —— : parts extracted from the conductor side.
- ▒▒ : Pattern on the side which is seen.

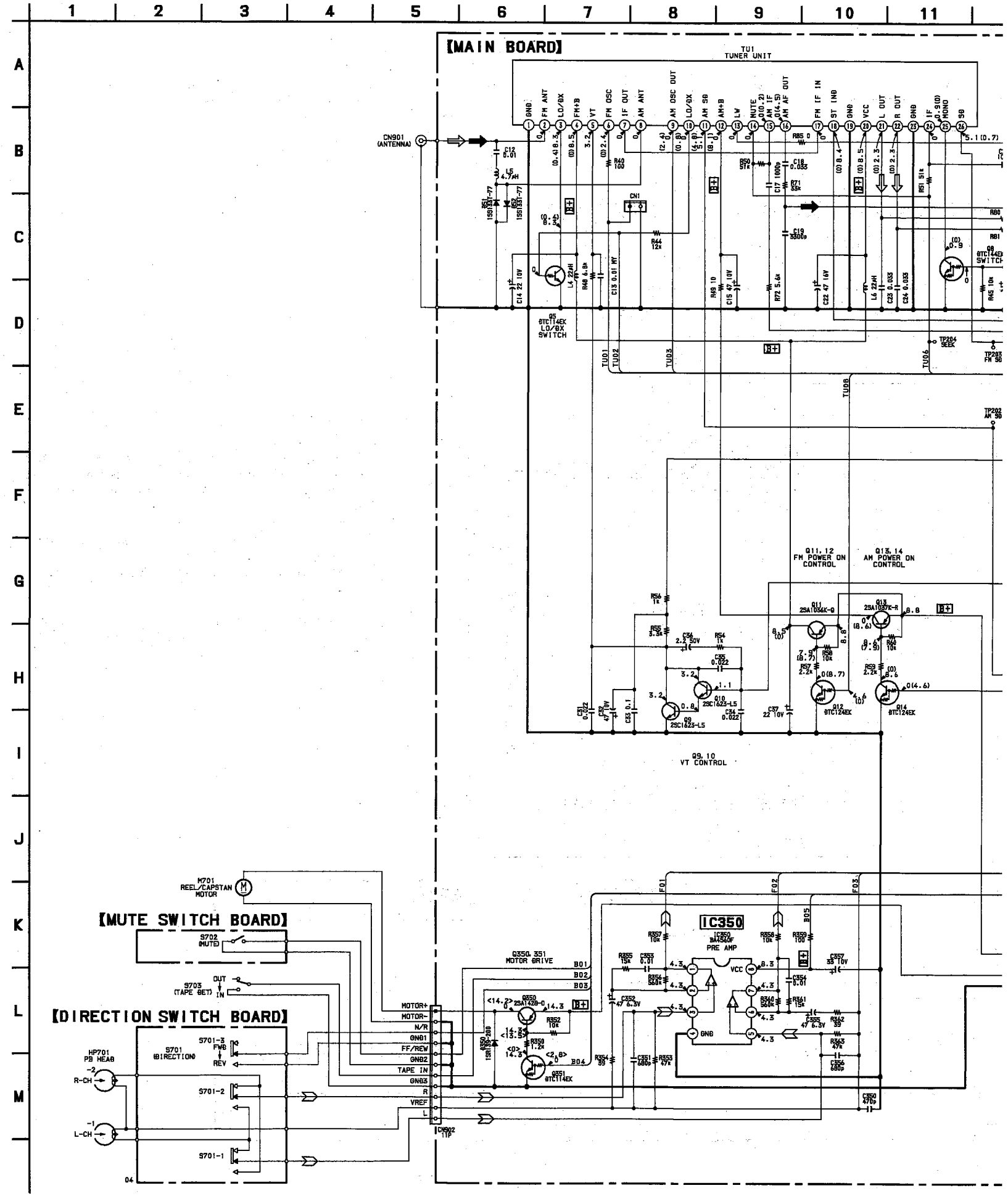


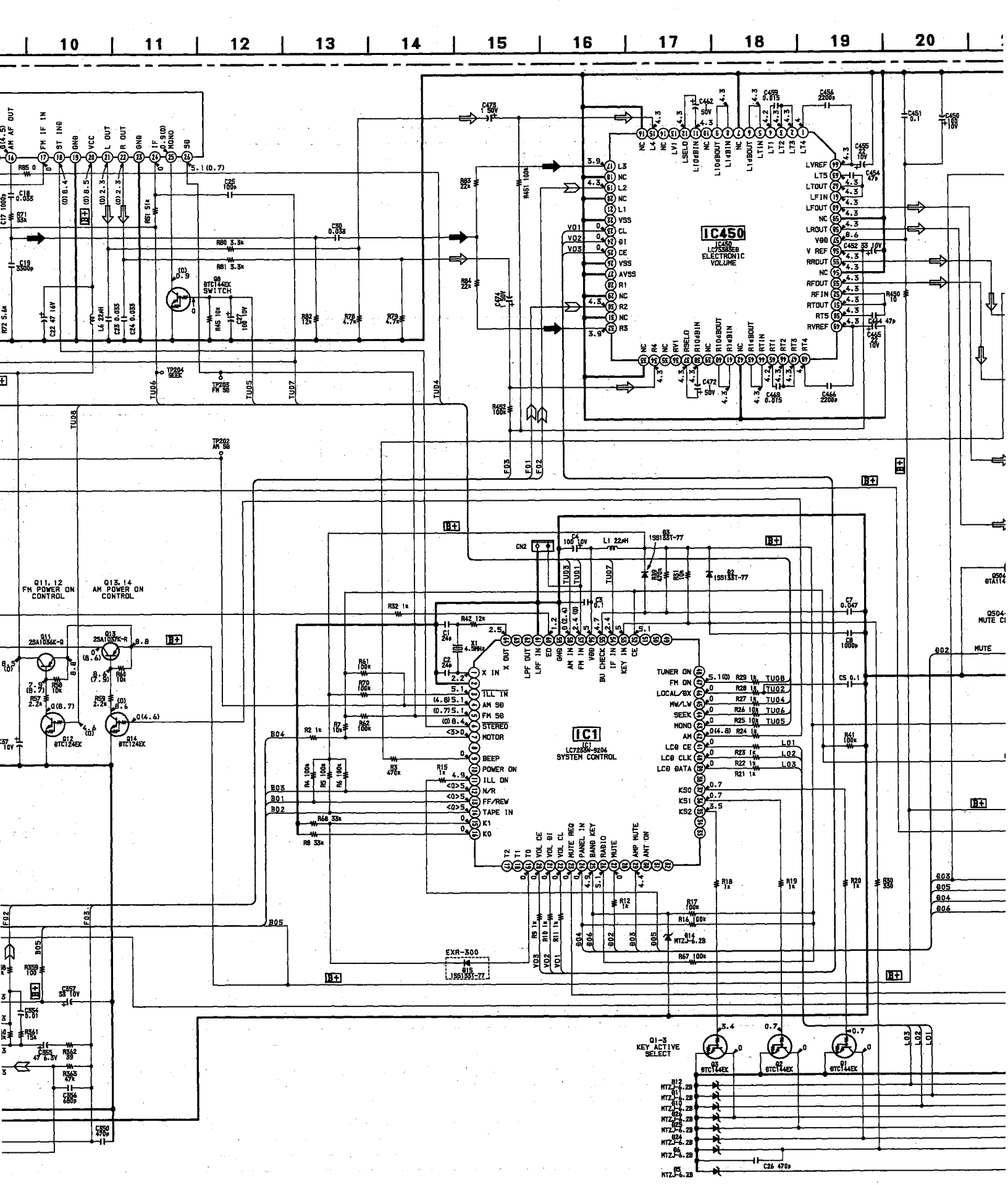

2
3
4
5
6
7
8
9
N BOARD]
L (LINE OUT) R
CN903-1
CN903-2
EXR-300
SWITCH BOARD
CN906

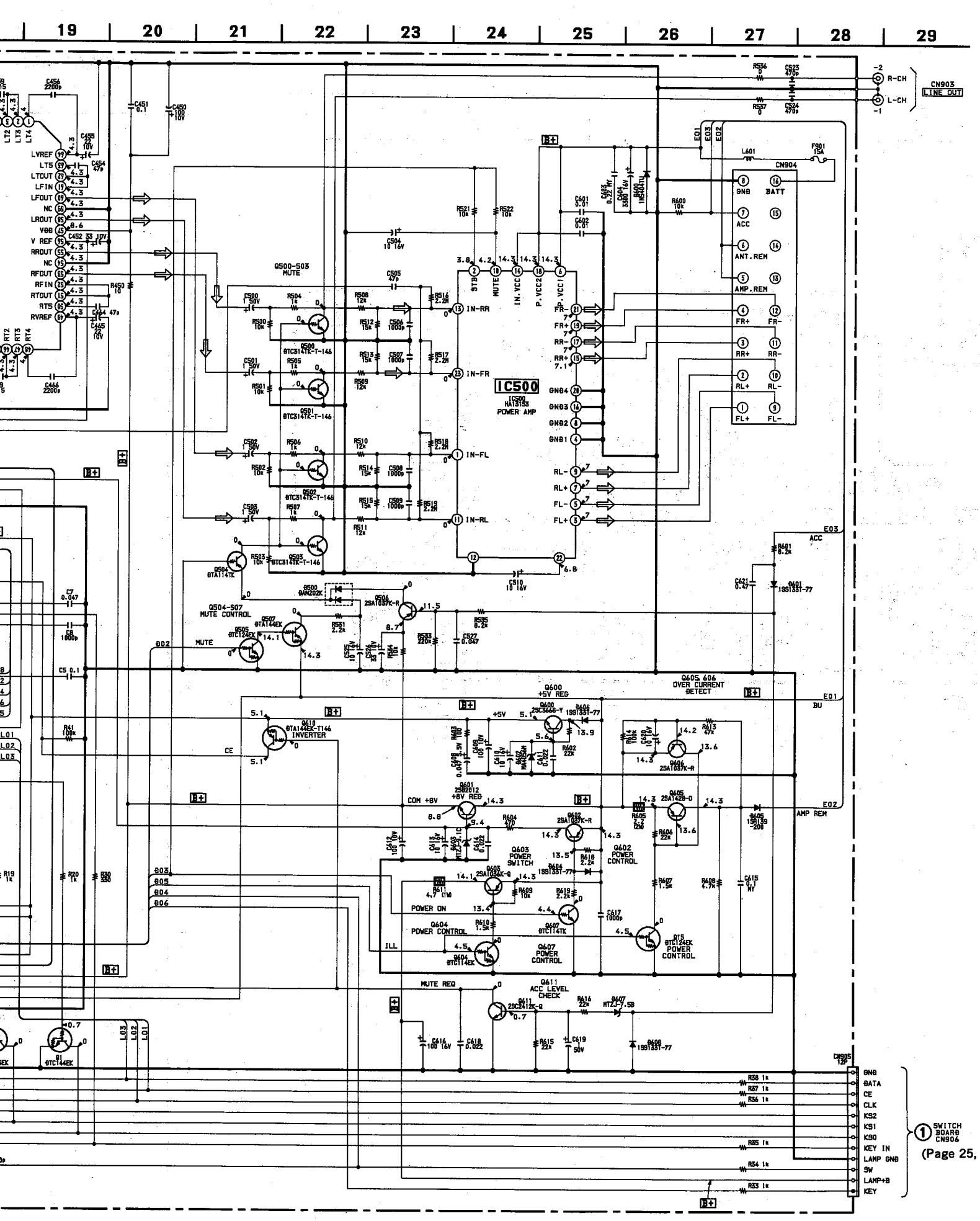
(Page 23, 28)


L (LINE OUT) R
CN903-1
CN903-2
16
12
11
10
9
8
7
6
5
4
3
2
1
YEL
BLK
RED
BLU
BLU/WHT
GRY/BLK
GRY
VIO/BLK
VIO
GRN
GRN/BLK
WHT
WHT/BLK
BATT
GND
ACC
ANT REM
AMP REM
(-) (+)
FRONT R-CH
REAR R-CH
REAR L-CH
FRONT L-CH
HP701
PB HEAD
RED
YEL
BLK
TP202
[AM SW]
[DIRECTION SWITCH BOARD]
WHT
RED
BLK
S703
(TAPE DET)
TAPE OUT
TAPE IN
YEL
YEL
[MUTE SWITCH BOARD]
S702
(MUTE)
BLU
RED
M701
REEL/CAPSTAN MOTOR

## 5-3. SCHEMATIC DIAGRAM—MAIN SECTION— • Refer to page 32 for IC Block Diagrams.




10
11
12
13
14
15
16
17
18
19
20
IC450
LC75358EB
ELECTRONIC VOLUME
IC1
LC72338N-9204
SYSTEM CONTROL
Q11, 12
FM POWER ON CONTROL
Q13, 14
AM POWER ON CONTROL
Q1-3
KEY ACTIVE SELECT
EXR-300
TUNER ON
FM ON
LOCAL/DX
MW/LW
SEEK
MONO
AM
LCD CE
LCD CLK
LCD DATA
KS0
KS1
KS2
X IN
ILL IN
AM SD
FM SD
STEREO
MOTOR
BEEP
POWER ON
ILL ON
N/R
FF/REW
TAPE IN
K1
K0
MUTE
TP202
AM SD
TP204
SEEK
TP205
FM SD

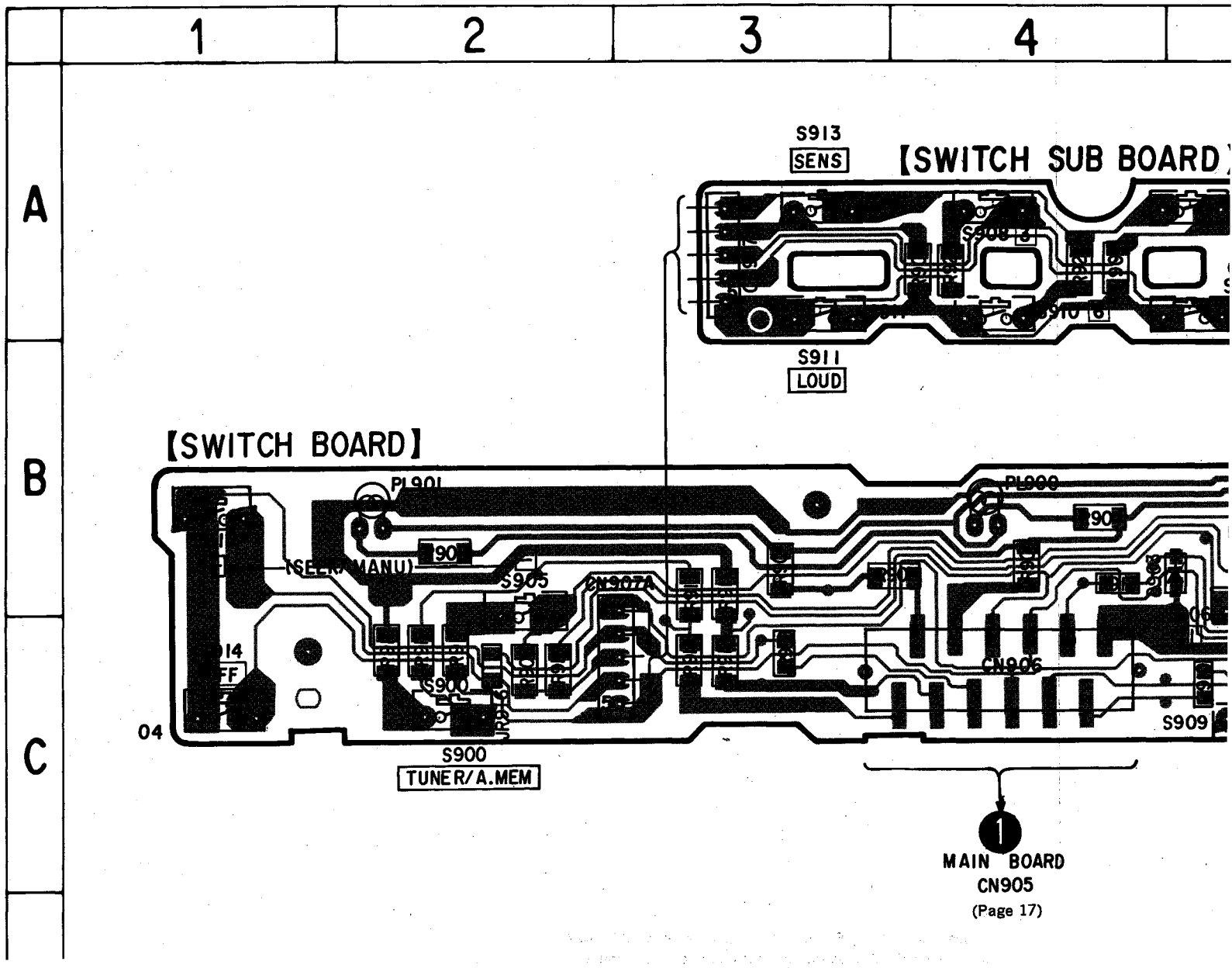

19
20
21
22
23
24
25
26
27
28
29
IC500
IC500
HA13153
POWER AMP
Q500-503
MUTE
Q504-507
MUTE CONTROL
Q600
+5V REG
Q601
+8V REG
Q603
POWER
SWITCH
Q602
POWER
CONTROL
Q604
POWER CONTROL
Q607
POWER
CONTROL
Q610
INVERTER
Q611
ACC LEVEL
CHECK
Q605, 606
OVER CURRENT
DETECT
CN903
LINE OUT
R-CH
L-CH
CN904
CN905
SWITCH
BOARD
CN906
(Page 25, 30)
IN-RR
IN-FR
IN-FL
IN-RL
STB
MUTE
IN.VCC1
P.VCC2
P.VCC1
GND
BATT
ACC
ANT.REM
AMP.REM
AMP REM
MUTE
MUTE REQ
POWER ON
ILL
COM +8V
+5V
ACC
BU
DATA
CLK
KEY IN
LAMP GND
SW
LAMP+B
KEY

**Note :**

- All capacitors are in $\mu$F unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ⊣NW⊢ : nonflammable resistor.
- B+ : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
  ( ): AM
  < >: PB
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇒ : PB

, 30)

## 5-4. PRINTED WIRING BOARD—PANEL SECTION (EXR-300)—



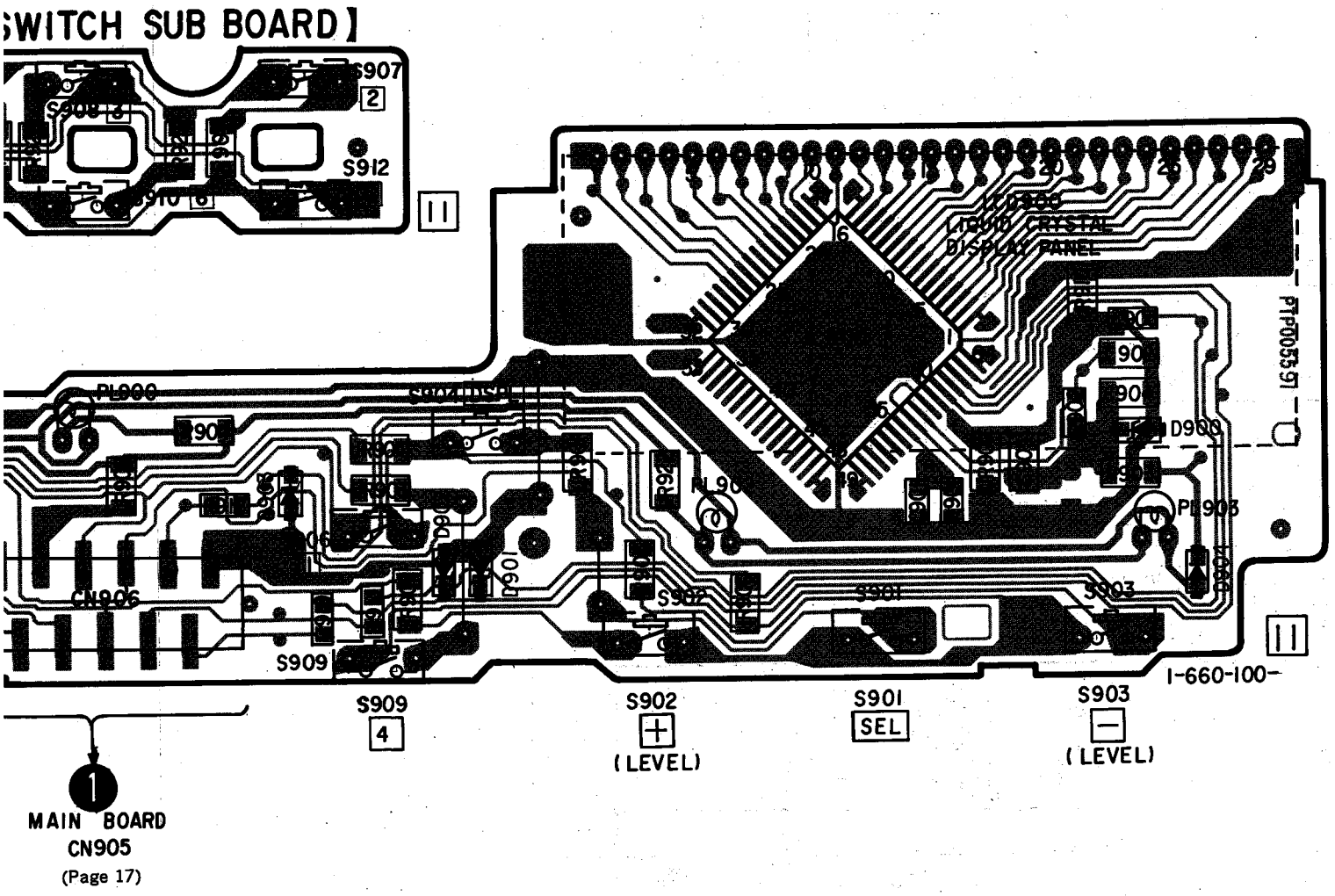

● **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D900 | B-7 |
| D901 | C-5 |
| D902 | C-5 |
| D903 | B-4 |
| D904 | C-7 |
| IC900 | B-6 |

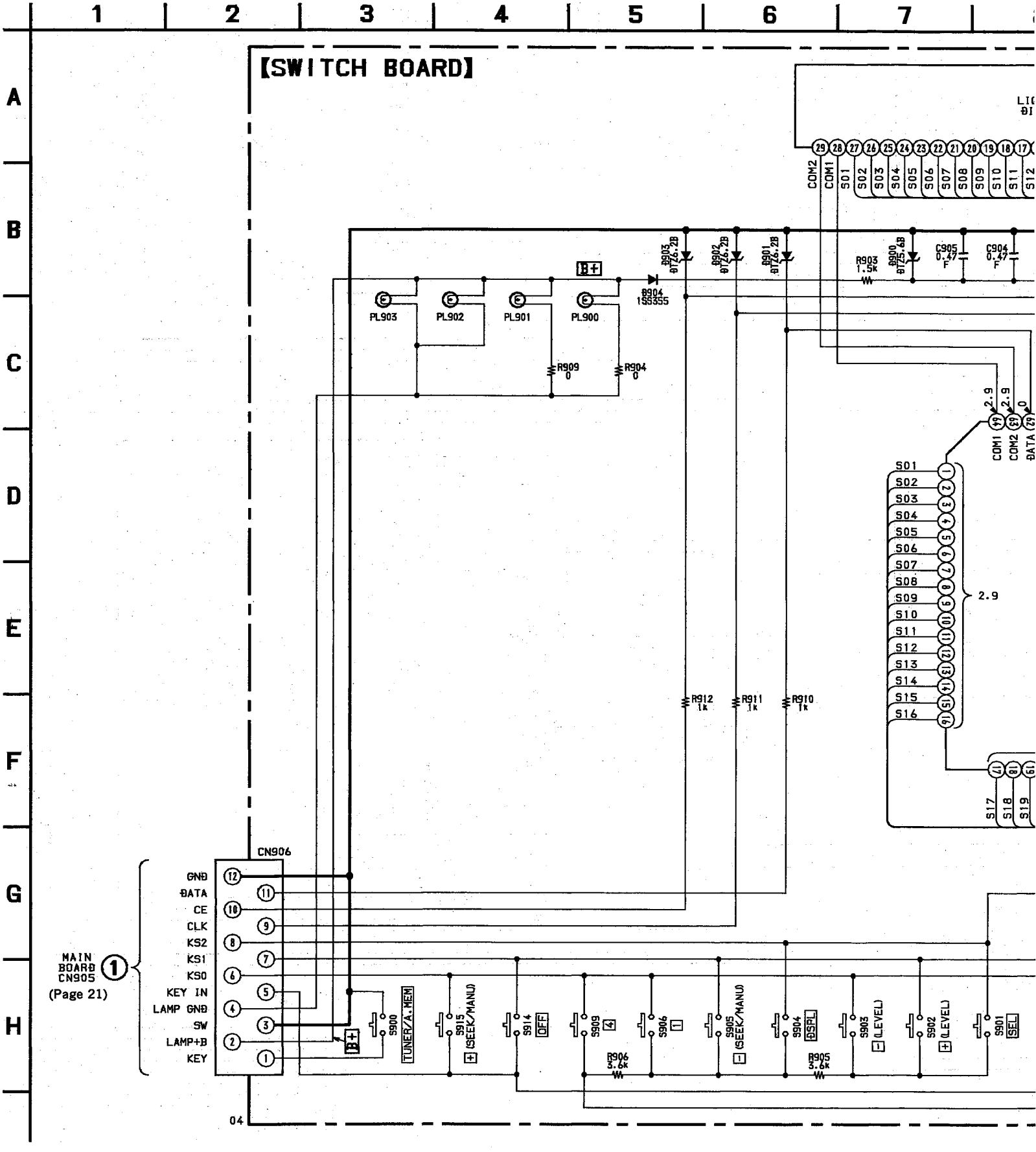
**Note:**

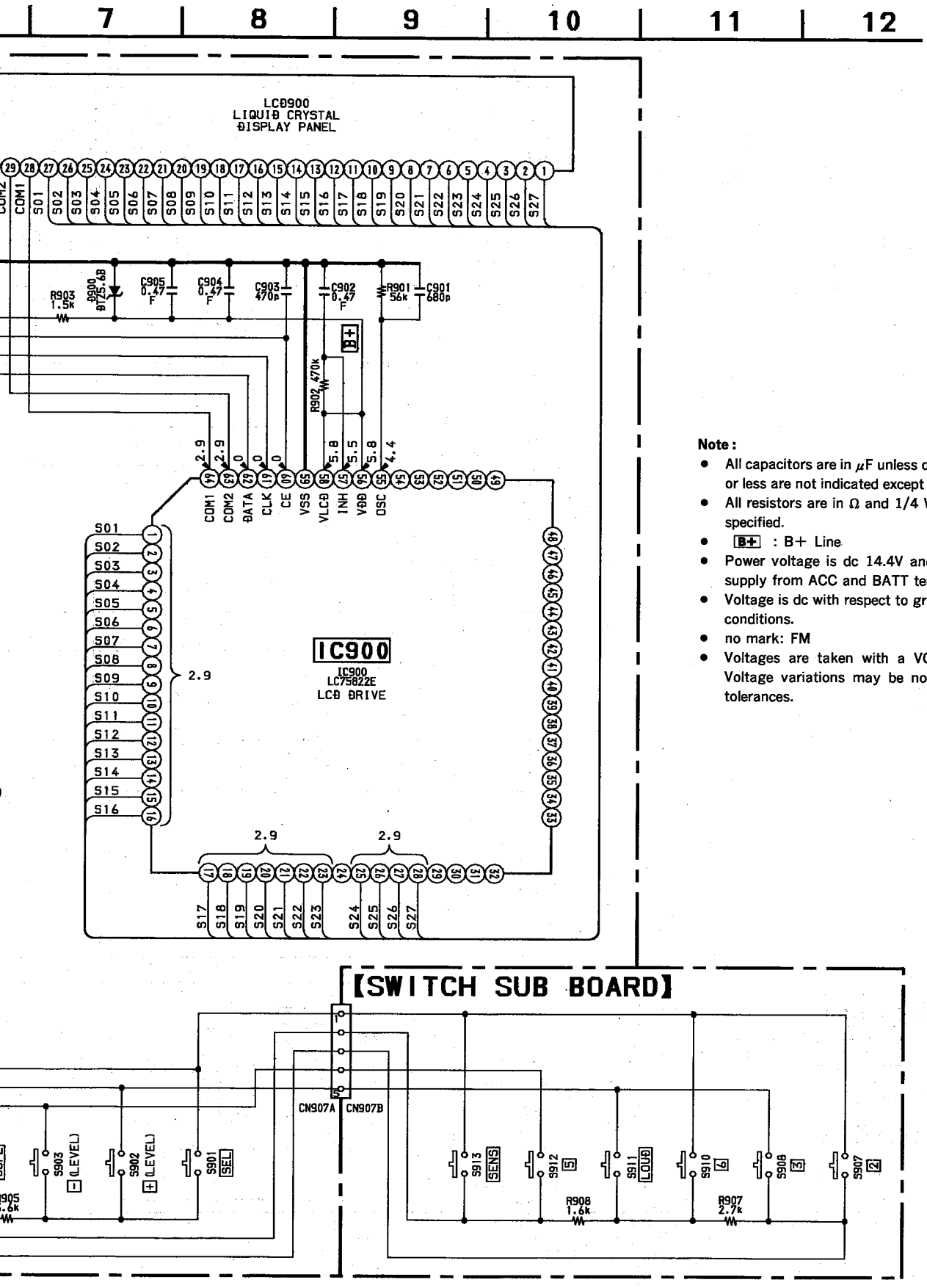
- ○— : parts extracted from the component side.
- ▒▒ : Pattern on the side which is seen.

| 4 | 5 | 6 | 7 | |
|---|---|---|---|---|


SWITCH SUB BOARD]
S907
2
S912
S910
PL900
S902
CN906
S909
S909
4
S902
+
(LEVEL)
S901
SEL
S903
−
(LEVEL)
LIQUID CRYSTAL DISPLAY PANEL
PTP00537
D900
PL903
I-660-100-
1
MAIN BOARD
CN905
(Page 17)

## 5-5. SCHEMATIC DIAGRAM—PANEL SECTION (EXR-300)—





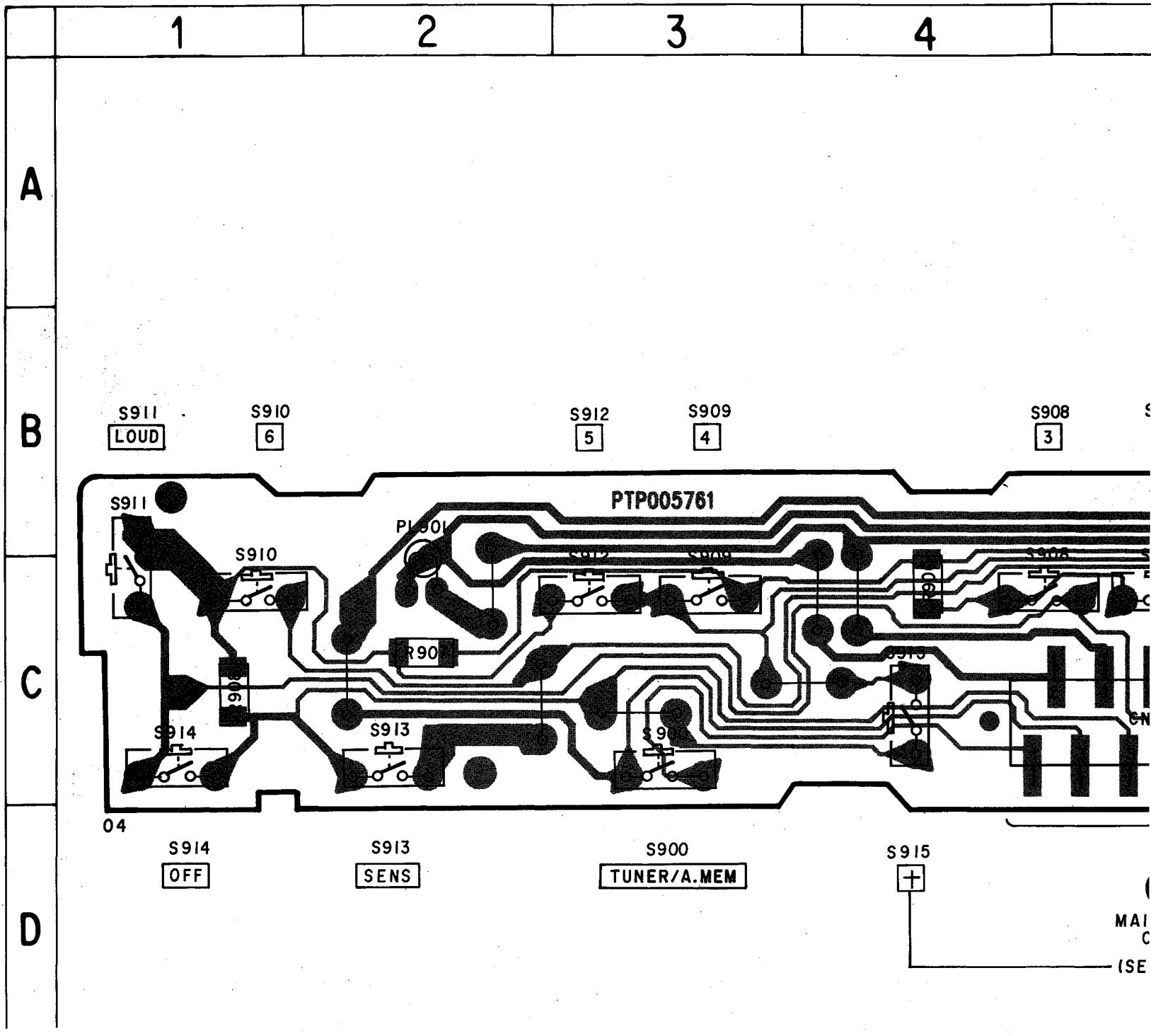




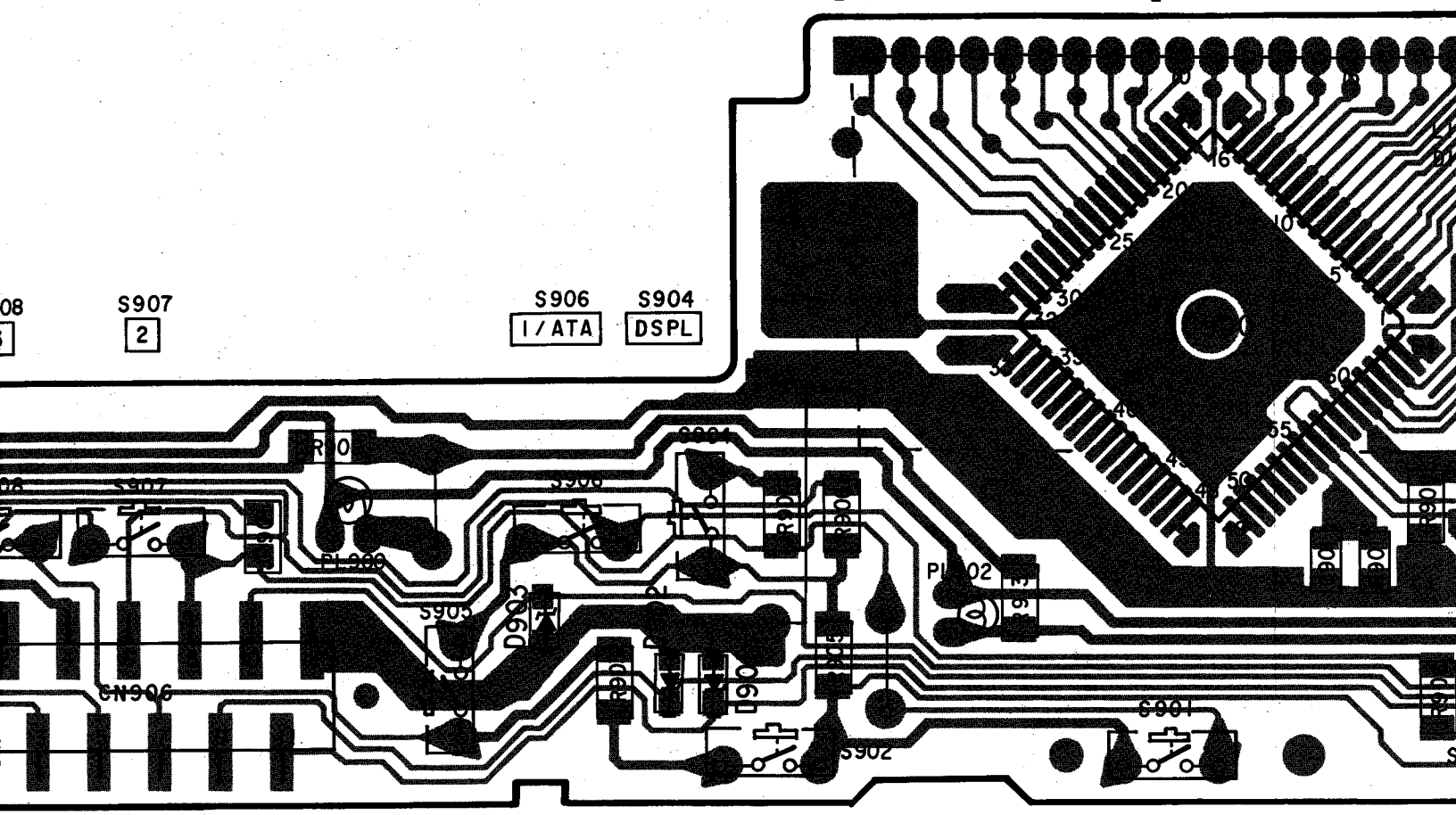
**Note :**

- All capacitors are in $\mu$F unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.

## 5-6. PRINTED WIRING BOARD—PANEL SECTION (XR-3500MK2)—



【SWITCH BOARD】




1
MAIN BOARD (Page 17)
CN905
(SEEK/MANU)

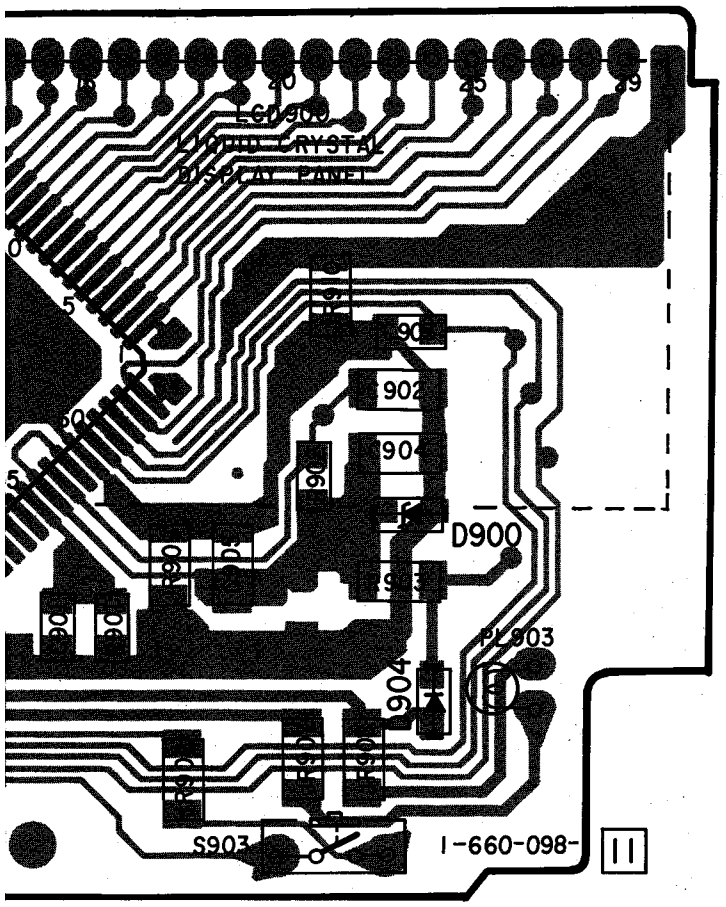
● **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D900 | B-10 |
| D901 | C-7 |
| D902 | C-7 |
| D903 | C-6 |
| D904 | C-10 |
| IC900 | B-8 |

**Note on Printed Wiring Board:**

- ○— : parts extracted from the component side.
- ▒▒ : Pattern on the side which is seen.

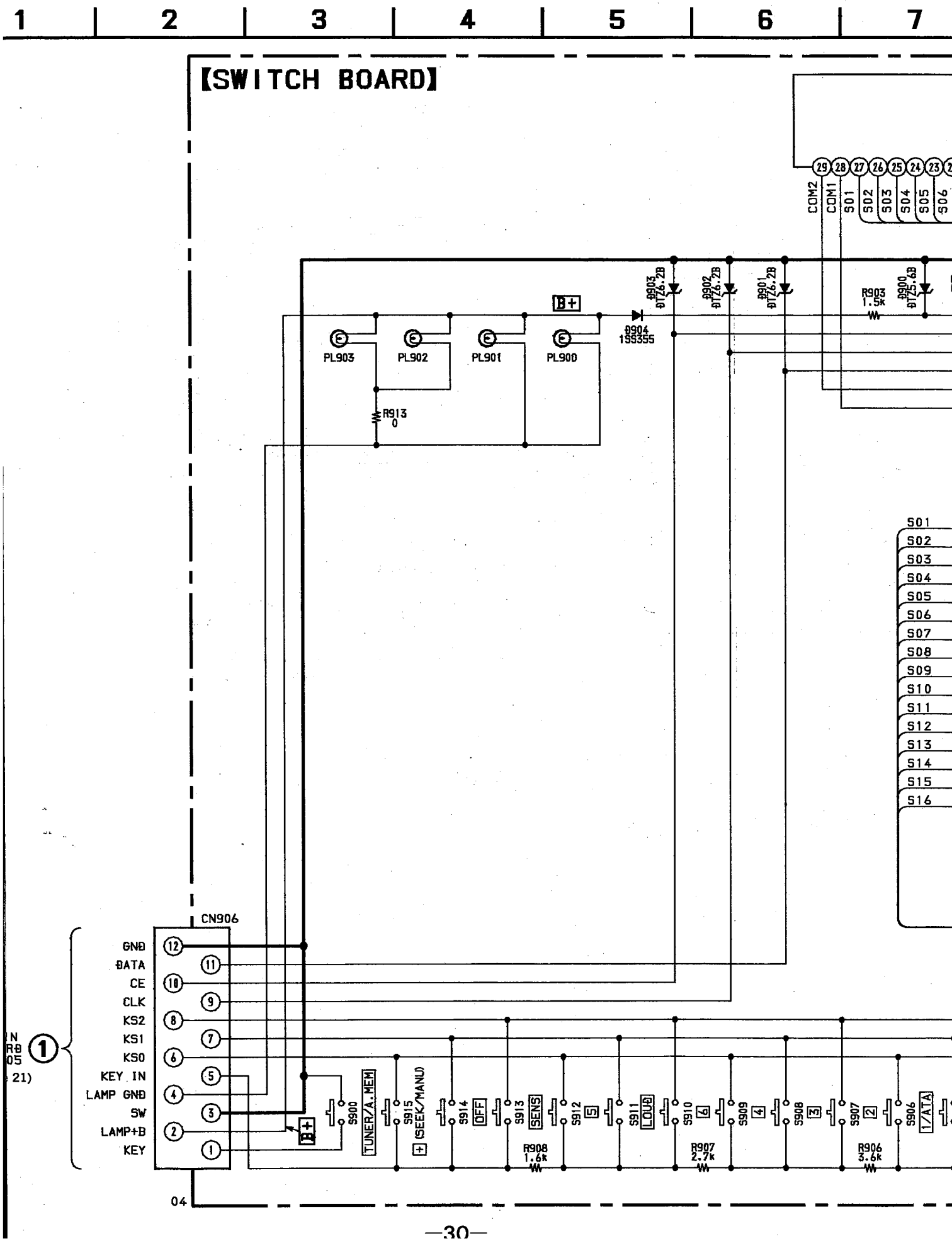
| 9 | 10 | |
|---|---|---|

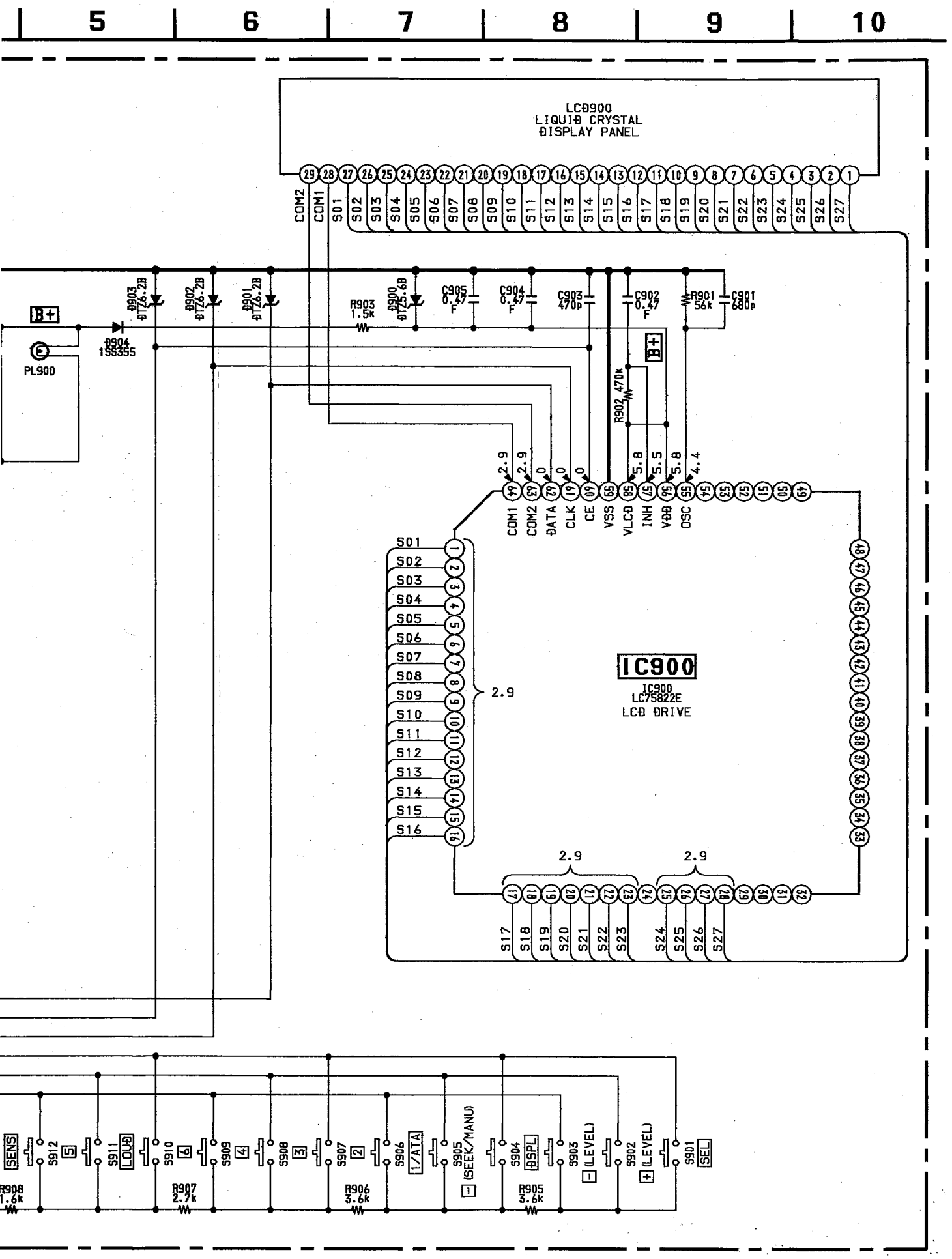



S903
(LEVEL)

**Note on Schematic Diagram:**

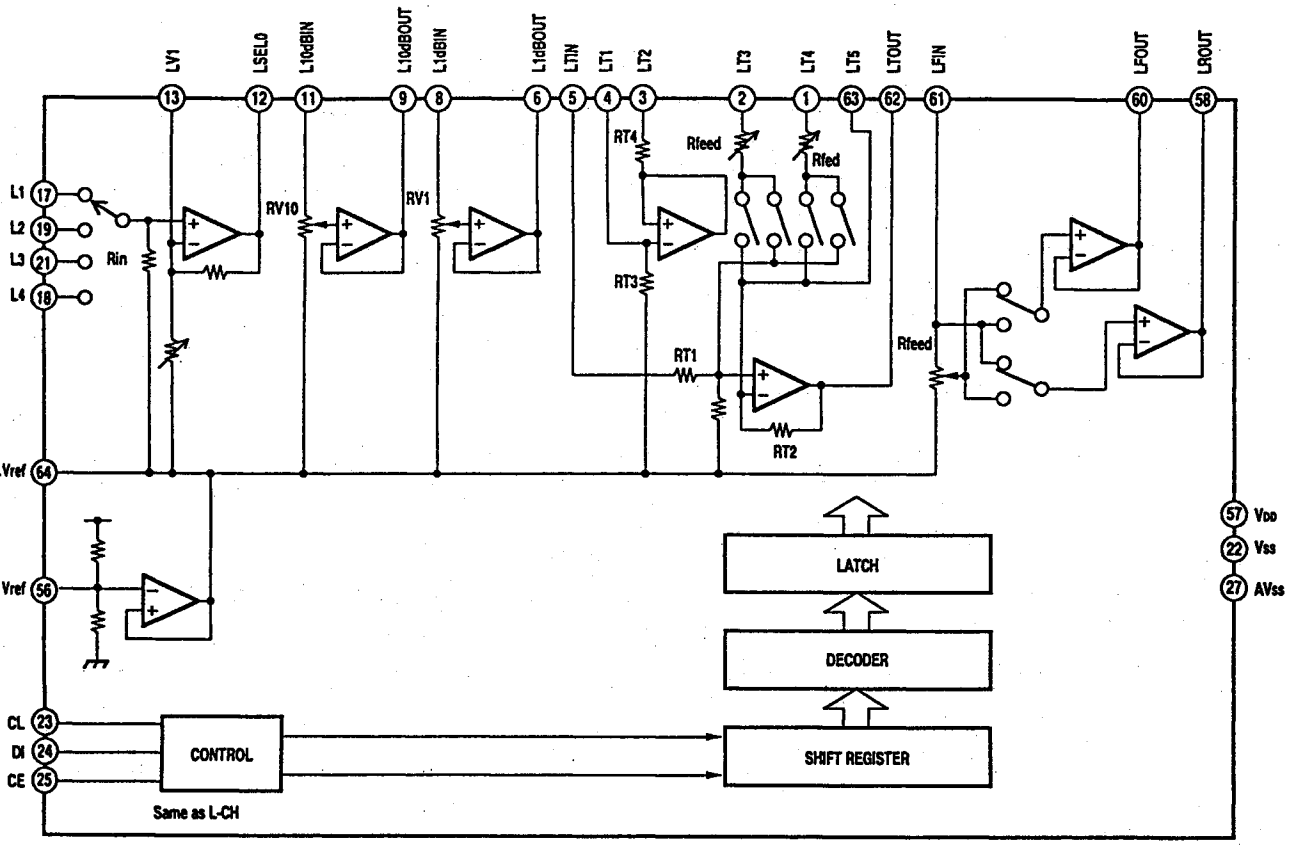
- All capacitors are in $\mu$F unless otherwise noted. pF : $\mu\mu$F 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT terminals.
- Voltage is dc with respect to ground under no-signal (detuned) conditions.
- no mark: FM
- Voltages are taken with a VOM (Input Impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.


1
2
3
4
5
6
7
【SWITCH BOARD】
COM2
COM1
S01
S02
S03
S04
S05
S06
B+
D903 DTZ6.2B
D902 DTZ6.2B
D901 DTZ6.2B
D900 DTZ5.6B
R903 1.5k
D904 1SS355
PL903
PL902
PL901
PL900
R913 0
S01
S02
S03
S04
S05
S06
S07
S08
S09
S10
S11
S12
S13
S14
S15
S16
CN906
GND
DATA
CE
CLK
KS2
KS1
KS0
KEY IN
LAMP GND
SW
LAMP+B
KEY
S900 TUNER/A.MEM
S915 (SEEK/MANU)
S914 OFF
S913 SENS
S912 5
S911 LOUD
S910 6
S909 4
S908 3
S907 2
S906 1/ATA
R908 1.6k
R907 2.7k
R906 3.6k
04

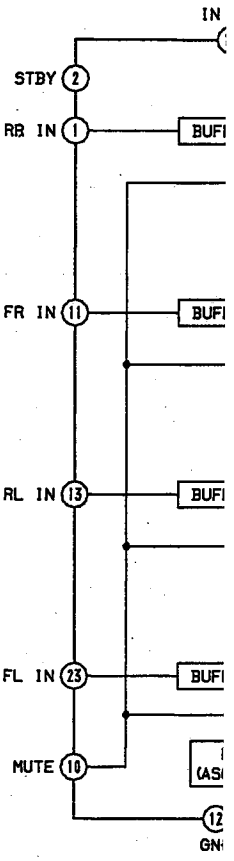

5
6
7
8
9
10
LCD900
LIQUID CRYSTAL
DISPLAY PANEL
COM2
COM1
S01
S02
S03
S04
S05
S06
S07
S08
S09
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
B+
D903 DTZ6.2B
D902 DTZ6.2B
D901 DTZ6.2B
D900 DTZ5.6B
D904 1SS355
PL900
R903 1.5k
C905 0.47
C904 0.47
C903 470p
C902 0.47
R901 56k
C901 680p
R902 470k
COM1
COM2
DATA
CLK
CE
VSS
VLCD
INH
VDD
OSC
IC900
IC900
LC75822E
LCD DRIVE
2.9
SENS
S912
5
S911
LOUD
S910
6
S909
4
S908
3
S907
2
S906
1/ATA
S905
(SEEK/MANU)
S904
DSPL
S903
(LEVEL)
S902
(LEVEL)
S901
SEL
R908 1.6k
R907 2.7k
R906 3.6k
R905 3.6k

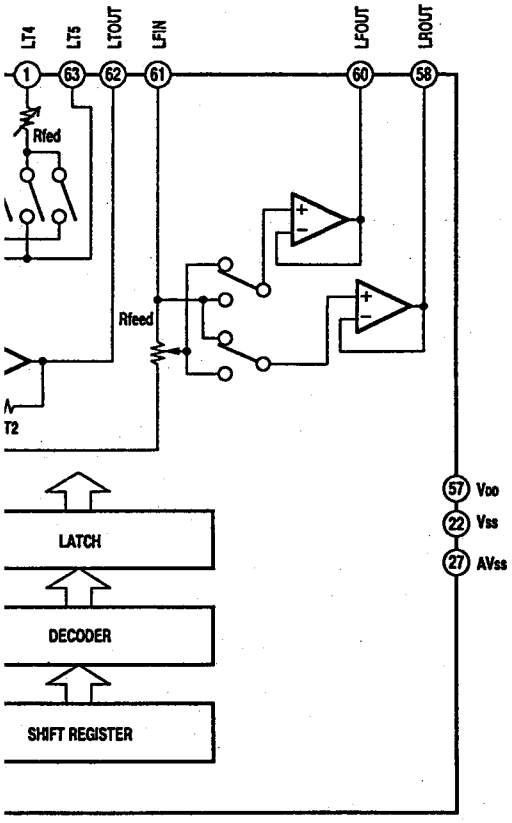
## • IC Block Diagrams

### IC450 LC75383ED

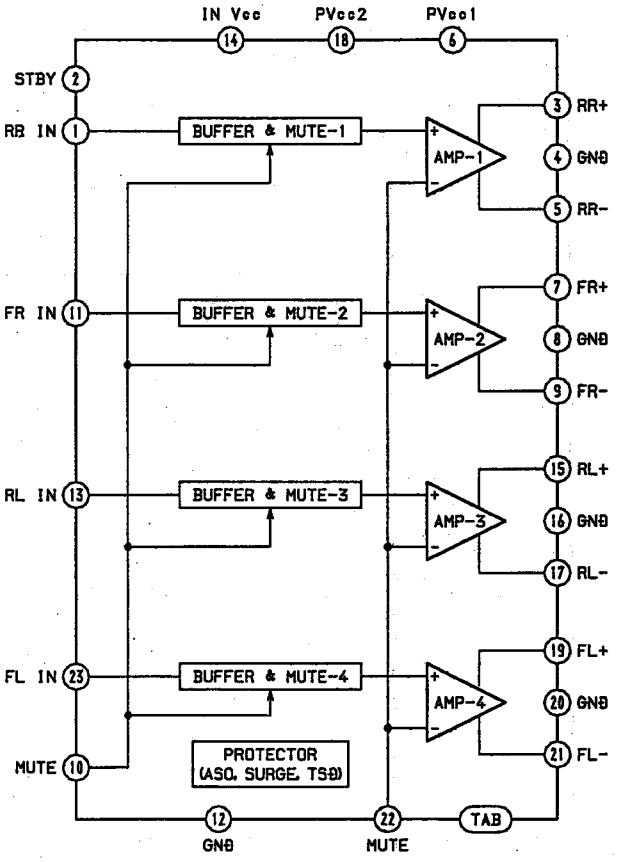



### IC500 HA13153






## IC500 HA13153

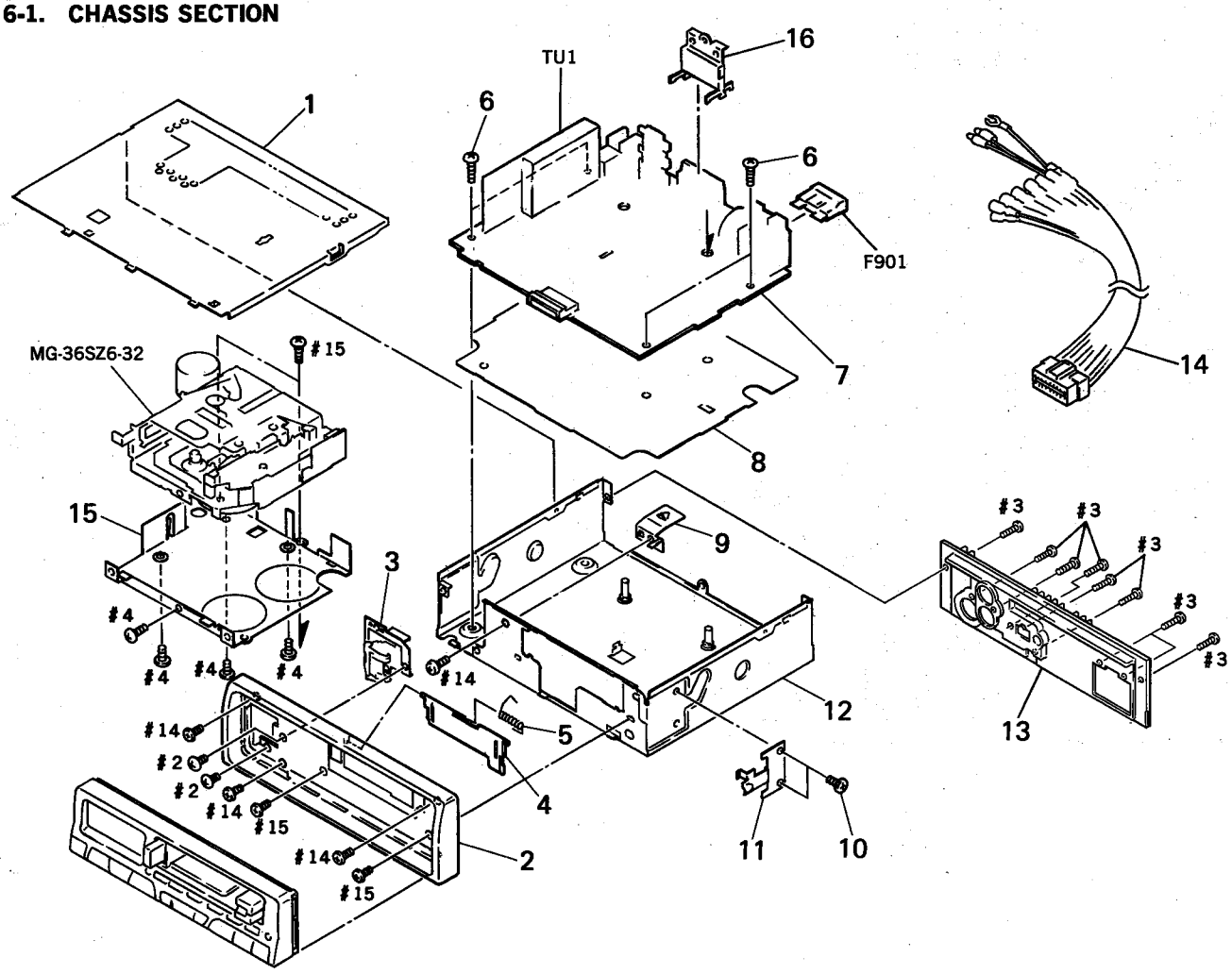


# SECTION 6
# EXPLODED VIEWS

NOTE:

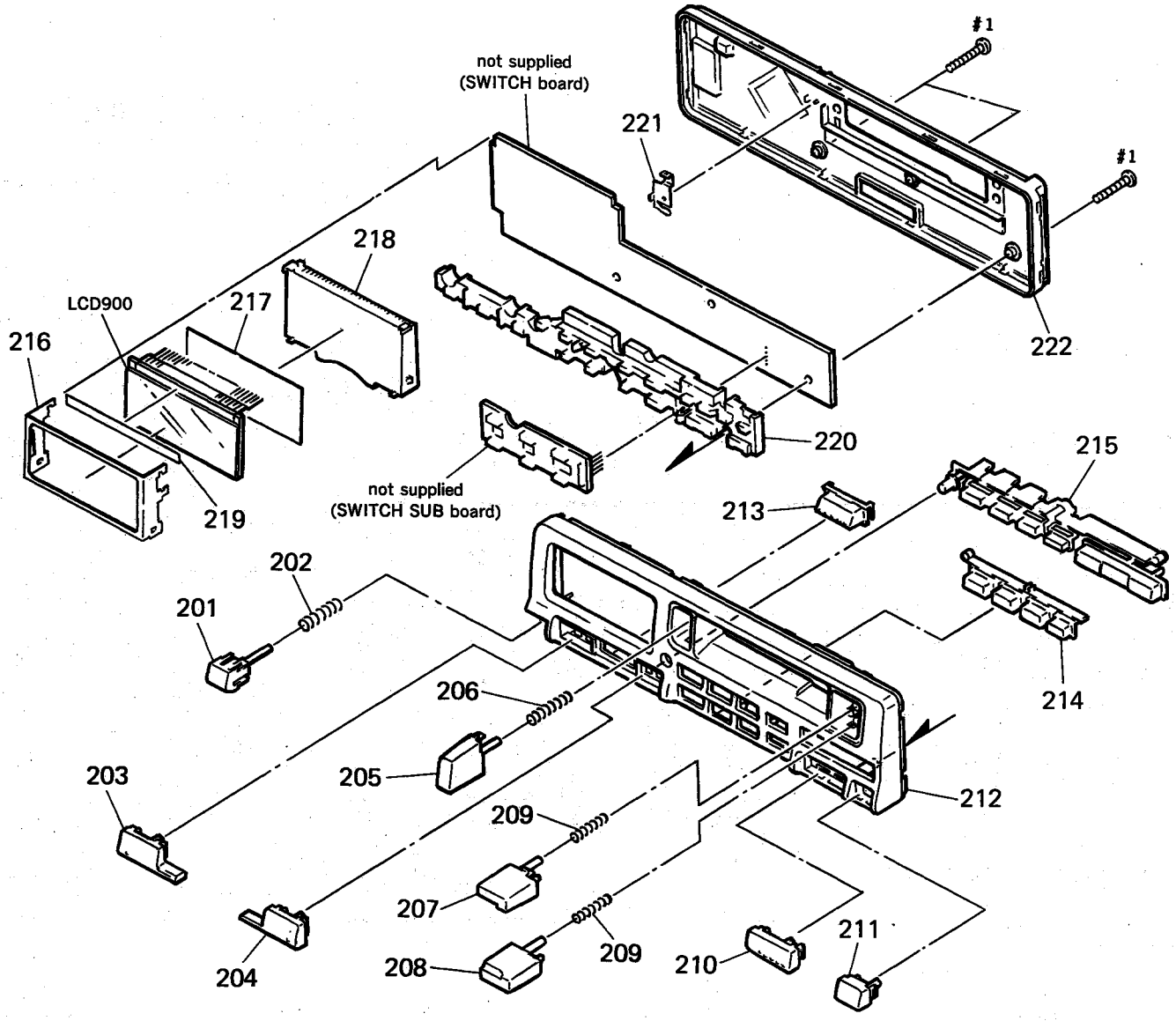
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE)... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

## 6-1. CHASSIS SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 1 | 3-922-517-01 | COVER | |
| 2 | 3-934-820-01 | PANEL, SUB | |
| 3 | X-3367-636-1 | LOCK ASSY | |
| 4 | 3-924-404-01 | DOOR, CASSETTE | |
| 5 | 3-377-892-01 | SPRING (C DOOR), TORSION | |
| 6 | 3-376-464-11 | SCREW(+PTT 2.6X6), GROUND POINT | |
| 7 | A-3294-036-A | MAIN BOARD, COMPLETE | |
| * 8 | 3-922-512-01 | INSULATOR | |
| * 9 | 3-909-089-01 | PLATE, LOCK | |
| 10 | 3-344-561-21 | SCREW (M4X4) | |
| * 11 | 3-909-090-01 | PLATE (R), LOCK | |
| * 12 | X-3369-999-1 | CHASSIS ASSY | |
| * 13 | 3-933-012-01 | SINK, HEAT | |
| 14 | 1-776-207-11 | CORD (WITH CONNECTOR) | |
| * 15 | 3-924-507-01 | BRACKET (MD) | |
| * 16 | 3-931-260-01 | BRACKET (IC) | |
| F901 | 1-532-982-11 | FUSE (BLADE TYPE) (AUTO FUSE) 15A | |
| TU1 | 1-693-336-11 | TUNER UNIT | |

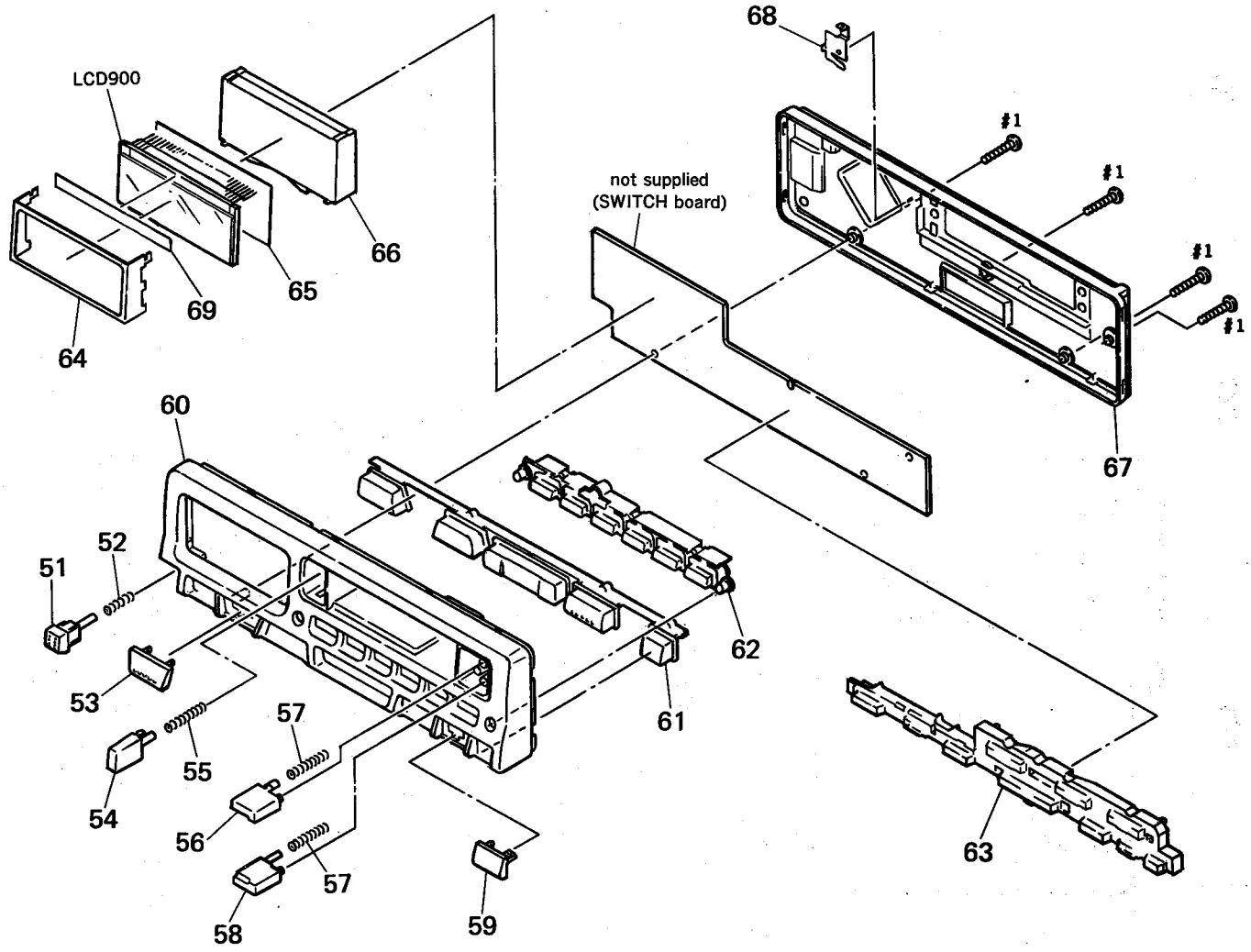
## 6-2. FRONT PANEL SECTION (EXR-300)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 201 | 3-926-938-01 | BUTTON (RELEASE) | |
| 202 | 3-375-372-01 | SPRING (RELEASE) | |
| 203 | 3-926-937-01 | BUTTON (-) | |
| 204 | 3-926-935-01 | BUTTON (+) | |
| 205 | 3-922-505-01 | BUTTON (EJECT) | |
| 206 | 3-922-513-01 | SPRING (EJECT), COMPRESSION | |
| 207 | 3-922-506-01 | BUTTON (FF) | |
| 208 | 3-922-507-01 | BUTTON (REW) | |
| 209 | 3-922-514-01 | SPRING (F/R), COMPRESSION | |
| 210 | 3-926-932-01 | BUTTON (TUNER) | |
| 211 | 3-926-931-01 | BUTTON (OFF) | |
| 212 | 3-933-014-01 | PANEL, FRONT | |

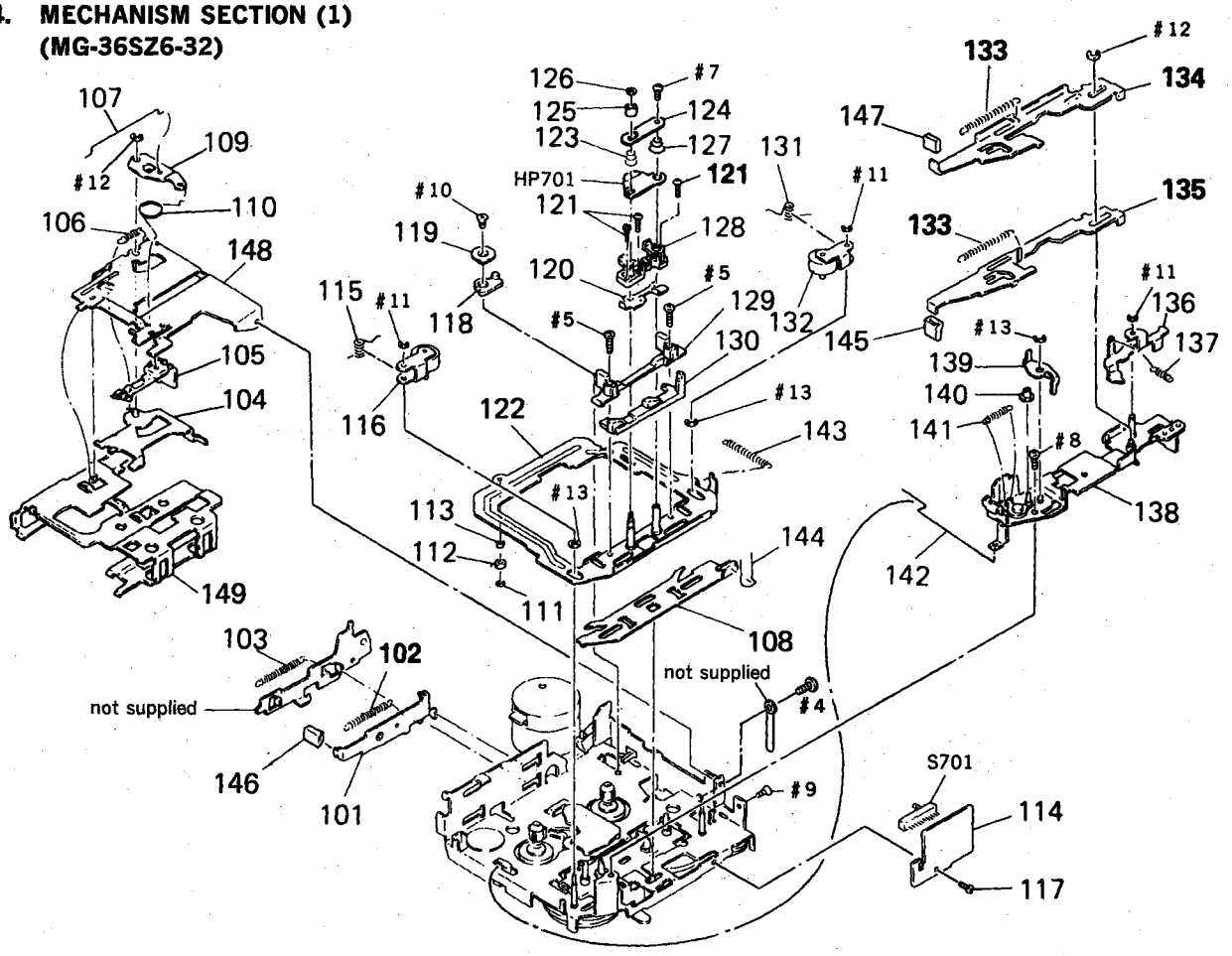
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 213 | 3-926-936-01 | BUTTON (SEL) | |
| 214 | 3-926-930-01 | BUTTON (LOUD) | |
| 215 | 3-926-929-01 | BUTTON (SENS) | |
| * 216 | 3-922-522-01 | PLATE (LCD), GROUND | |
| * 217 | 3-934-818-01 | REFLECTOR | |
| * 218 | 3-922-509-01 | PLATE (LCD), LIGHT GUIDE | |
| * 219 | 3-934-819-01 | INSULATOR | |
| * 220 | 3-927-458-01 | PLATE (BUTTON), LIGHT GUIDE | |
| * 221 | 3-922-523-01 | PLATE (F/S), GROUND | |
| 222 | 3-934-865-01 | PANEL, FRONT BACK | |
| LCD900 | 1-801-228-11 | DISPLAY PANEL, LIQUID CRYSTAL | |

## 6-3. FRONT PANEL SECTION (XR-3500MK2)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 3-922-508-01 | BUTTON (RELEASE) | |
| 52 | 3-375-372-01 | SPRING (RELEASE) | |
| 53 | 3-922-502-01 | BUTTON (SEL) | |
| 54 | 3-922-505-01 | BUTTON (EJECT) | |
| 55 | 3-922-513-01 | SPRING (EJECT), COMPRESSION | |
| 56 | 3-922-506-01 | BUTTON (FF) | |
| 57 | 3-922-514-01 | SPRING (F/R), COMPRESSION | |
| 58 | 3-922-507-01 | BUTTON (REW) | |
| 59 | 3-922-503-01 | BUTTON (SENS) | |
| 60 | 3-933-011-01 | PANEL, FRONT | |
| 61 | 3-922-504-01 | BUTTON (OFF) | |
| 62 | 3-922-501-01 | BUTTON (1-6) | |
| * 63 | 3-922-510-01 | PLATE (BUTTON), LIGHT GUIDE | |
| * 64 | 3-922-522-01 | PLATE (LCD), GROUND | |
| * 65 | 3-934-818-01 | REFLECTOR | |
| * 66 | 3-922-509-01 | PLATE (LCD), LIGHT GUIDE | |
| 67 | 3-934-864-01 | PANEL, FRONT BACK | |
| * 68 | 3-922-523-01 | PLATE (F/S), GROUND | |
| * 69 | 3-934-819-01 | INSULATOR | |
| LCD900 | 1-801-228-11 | DISPLAY PANEL, LIQUID CRYSTAL | |

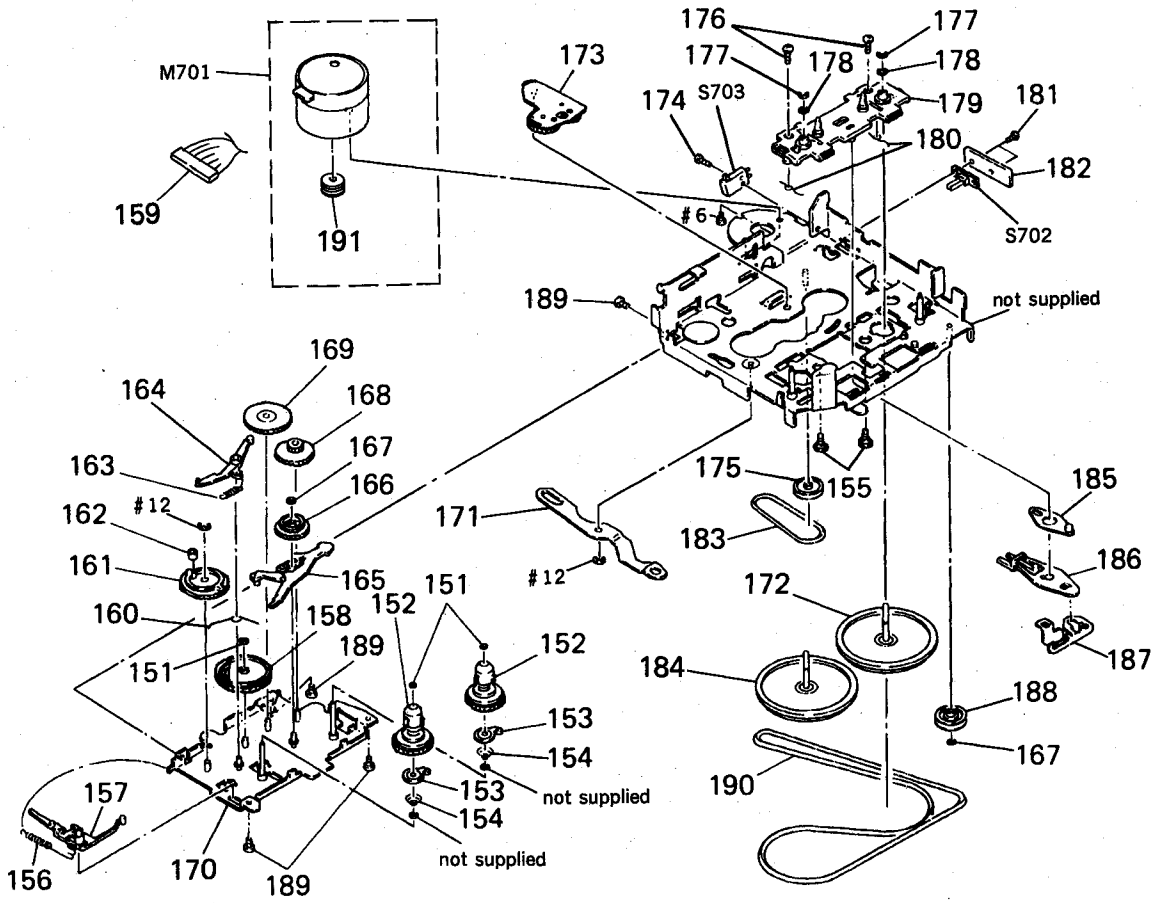
## 6-4. MECHANISM SECTION (1)
## (MG-36SZ6-32)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 101 | 3-379-144-01 | LEVER (S), EJECT | |
| 102 | 3-392-950-01 | SPRING | |
| 103 | 3-392-951-01 | SPRING | |
| * 104 | 3-392-921-01 | LOCK ASSY, EJECT CAM | |
| 105 | 3-392-972-01 | HOOKER, TAPE | |
| 106 | 3-392-953-01 | SPRING | |
| 107 | 3-392-969-01 | LINK, RETURN | |
| * 108 | 3-392-919-01 | ARM ASSY, F, R SELECTION | |
| * 109 | 3-392-932-01 | PLATE, CENTER | |
| 110 | 3-392-961-01 | SPRING (B) | |
| 111 | 3-570-615-00 | POLY-WASHER (DIA. 1.2) | |
| 112 | 3-392-945-01 | ROLLER (A), H.P | |
| 113 | 3-392-942-01 | ROLLER (B), H.P | |
| 114 | 3-392-970-01 | CHASSIS, SWITCH (DIRECTION SWITCH BOARD) | |
| 115 | 3-392-958-01 | SPRING (R) | |
| 116 | 3-375-378-01 | ARM (R) ASSY, PINCH | |
| * 117 | 4-908-792-11 | SCREW (B2) | |
| 118 | 3-372-244-01 | ARM (N), MUTE | |
| * 119 | 3-397-427-01 | COLLAR, MUTE ARM | |
| 120 | 3-377-908-01 | SHIM (X), ADJUSTOR | |
| 121 | 3-375-379-01 | SCREW, AZIMUTH | |
| * 122 | 3-392-975-05 | PLATE ASSY (S), HEAD | |
| 123 | 3-392-956-01 | SPRING (A) | |
| * 124 | 3-392-930-01 | RETAINER, SPRING | |
| 125 | 3-392-943-01 | ROLLER, FF | |
| 126 | 3-676-387-00 | POLY-SLIDER (DIA. 1.6) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 127 | 3-392-955-01 | SPRING (A) | |
| * 128 | 3-379-142-01 | ARM (B), ADJUSTOR | |
| 129 | 3-392-984-02 | GUIDE, TAPE | |
| 130 | 3-377-909-02 | LINK (X), ADJUSTOR | |
| 131 | 3-392-957-01 | SPRING (F) | |
| 132 | 3-375-377-01 | ARM (F) ASSY, PINCH | |
| 133 | 3-392-948-01 | SPRING | |
| * 134 | 3-379-145-01 | LEVER (S), FF | |
| * 135 | 3-379-146-01 | LEVER (S), REW | |
| * 136 | 3-392-935-01 | ARM, LOCK | |
| 137 | 3-392-917-01 | SPRING | |
| * 138 | 3-372-242-01 | BRACKET ASSY (D), LEVER | |
| * 139 | 3-392-933-01 | LEVER (B), CHANGE | |
| 140 | 3-392-994-01 | ROLLER, PROGRAM | |
| 141 | 3-392-954-01 | SPRING | |
| 142 | 3-372-243-01 | LINK (B), SELECTOR | |
| 143 | 3-392-952-01 | SPRING | |
| 144 | 3-392-962-01 | SPRING | |
| * 145 | 3-379-139-01 | BUTTON, REW | |
| * 146 | 3-379-140-01 | BUTTON, EJECT | |
| * 147 | 3-379-141-01 | BUTTON, FF | |
| 148 | 3-375-383-01 | HANGER (X), CASSETTE | |
| 149 | 3-375-384-01 | HOLDER (X), CASSETTE | |
| HP701 | 1-543-717-11 | HEAD, MAGNETIC (PLAYBACK) | |
| S701 | 1-692-502-11 | SWITCH, SLIDE (DIRECTION) | |

## 6-5. MECHANISM SECTION (2)
## (MG-36SZ6-32)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 3-676-387-00 | POLY-SLIDER (DIA. 1.6) | |
| 152 | 3-376-196-01 | SPINDLE ASSY (S), REEL | |
| 153 | 3-375-380-01 | CAM ASSY, DETECTION | |
| 154 | 3-370-619-01 | SPRING, BACK TENSION | |
| 155 | 3-392-918-01 | SCREW, EJECT HOOK | |
| 156 | 3-392-959-01 | SPRING | |
| 157 | 3-392-985-02 | RATCHET | |
| 158 | 3-392-990-01 | GEAR, DETECTION | |
| 159 | 3-387-912-01 | CONNECTOR ASSY, 11P | |
| 160 | 3-392-960-01 | SPRING | |
| 161 | 3-392-987-01 | GEAR, SELECTOR | |
| 162 | 3-392-944-01 | COLLAR (SELECTOR GEAR) | |
| 163 | 3-375-131-01 | SPRING, GEAR LOCK ARM | |
| 164 | 3-392-989-02 | ARM, GEAR LOCK | |
| 165 | 3-392-986-01 | ARM, SENSOR | |
| 166 | 3-392-915-01 | GEAR, IDLE | |
| 167 | 3-570-615-00 | POLY-WASHER (DIA. 1.2) | |
| 168 | 3-392-936-01 | GEAR (A) | |
| 169 | 3-392-937-01 | GEAR (B) | |
| * 170 | 3-392-976-01 | BASE ASSY, REEL | |
| * 171 | 3-392-979-01 | LEVER, REVERSE | |
| 172 | 3-392-926-02 | FLYWHEEL ASSY (BF) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 173 | 3-392-916-01 | ARM ASSY, TU GEAR | |
| 174 | 3-318-203-11 | SCREW (B1.7X6), TAPPING | |
| 175 | 3-392-938-01 | GEAR, PULLY | |
| 176 | 3-318-204-81 | SCREW (M1.7X3), TAPPING | |
| 177 | 3-590-768-00 | RING (A), E | |
| 178 | 3-701-437-11 | POLY-SLIDER (A) | |
| * 179 | 3-375-381-01 | BRACKET ASSY (X), CM | |
| 180 | 3-392-963-01 | SPRING (R) | |
| 181 | 3-318-204-91 | SCREW (M1.7X4), TAPPING | |
| 182 | 3-375-376-01 | MUTE (PWB) (MUTE SWITCH BOARD) | |
| 183 | 3-375-375-02 | BELT (C), SUB | |
| 184 | 3-392-995-02 | FLYWHEEL ASSY (BR) | |
| * 185 | 3-392-925-01 | ARM (A) ASSY, F.R | |
| * 186 | 3-392-939-01 | ARM, FF | |
| * 187 | 3-392-934-01 | ARM (B), F.R | |
| 188 | 3-392-941-01 | PULLEY (A), IDLE | |
| * 189 | 4-908-792-11 | SCREW (B2) | |
| 190 | 3-392-967-01 | BELT, MAIN | |
| * 191 | 3-392-913-01 | PULLEY, MOTOR | |
| M701 | X-3364-496-1 | MOTOR ASSY (REEL/CAPSTAN) | |
| S702 | 1-692-065-11 | SWITCH, LEAF (MUTE) | |
| S703 | 1-554-790-21 | SWITCH, POWER (TAPE DET) | |

# SECTION 7
# ELECTRICAL PARTS LIST

**MAIN**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | A-3294-036-A | MAIN BOARD, COMPLETE | | | |
| | | ********** | | | |
| * | 3-931-260-01 | BRACKET (IC) | | | |
| | | < CAPACITOR > | | | |
| C1 | 1-163-102-00 | CERAMIC CHIP | 24PF | 5% | 50V |
| C2 | 1-163-102-00 | CERAMIC CHIP | 24PF | 5% | 50V |
| C3 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C4 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C5 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C7 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V |
| C8 | 1-163-205-00 | CERAMIC CHIP | 0.001uF | 5% | 50V |
| C12 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C13 | 1-130-483-00 | MYLAR | 0.01uF | 5% | 50V |
| C14 | 1-128-054-11 | ELECT | 22uF | 20% | 10V |
| C15 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C17 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C18 | 1-163-989-11 | CERAMIC CHIP | 0.033uF | 10% | 25V |
| C19 | 1-164-182-11 | CERAMIC CHIP | 0.0033uF | 10% | 50V |
| C22 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C23 | 1-163-989-11 | CERAMIC CHIP | 0.033uF | 10% | 25V |
| C24 | 1-163-989-11 | CERAMIC CHIP | 0.033uF | 10% | 25V |
| C25 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C26 | 1-163-197-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C27 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C30 | 1-163-989-11 | CERAMIC CHIP | 0.033uF | 10% | 25V |
| C31 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C32 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C33 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C34 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C35 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C36 | 1-124-257-00 | ELECT | 2.2uF | 20% | 50V |
| C37 | 1-128-054-11 | ELECT | 22uF | 20% | 10V |
| C350 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C351 | 1-163-007-11 | CERAMIC CHIP | 680PF | 10% | 50V |
| C352 | 1-126-154-11 | ELECT | 47uF | 20% | 6.3V |
| C353 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C354 | 1-164-232-11 | CERAMIC CHIP | 0.01uF | | 50V |
| C355 | 1-126-154-11 | ELECT | 47uF | 20% | 6.3V |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C356 | 1-163-007-11 | CERAMIC CHIP | 680PF | 10% | 50V |
| C357 | 1-124-229-00 | ELECT | 33uF | 20% | 10V |
| C450 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C451 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C452 | 1-124-229-00 | ELECT | 33uF | 20% | 10V |
| C454 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C455 | 1-128-054-11 | ELECT | 22uF | 20% | 10V |
| C456 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V |
| C459 | 1-163-023-00 | CERAMIC CHIP | 0.015uF | 5% | 50V |
| C462 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C464 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C465 | 1-128-054-11 | ELECT | 22uF | 20% | 10V |
| C466 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V |
| C469 | 1-163-023-00 | CERAMIC CHIP | 0.015uF | 5% | 50V |
| C472-474 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C500-503 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C504 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C505 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C506-509 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C510 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C523 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C524 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C525 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C526 | 1-124-229-00 | ELECT | 33uF | 20% | 10V |
| C527 | 1-104-760-11 | CERAMIC CHIP | 0.047uF | 10% | 50V |
| C601 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C602 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C603 | 1-136-169-00 | FILM | 0.22uF | 5% | 50V |
| C604 | 1-126-936-11 | ELECT | 3300uF | 20% | 16V |
| C608 | 1-125-701-11 | CAPACITOR | 0.047F | | 5.5V |
| C609 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C610 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C611 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C612 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C613 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C614 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C615 | 1-136-165-00 | FILM | 0.1uF | 5% | 50V |

# MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C616 | 1-128-134-11 | ELECT | 100uF | 20% | 16V |
| C617 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C618 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% | 25V |
| C619 | 1-126-301-11 | ELECT | 1uF | 20% | 50V |
| C620 | 1-126-157-11 | ELECT | 10uF | 20% | 16V |
| C621 | 1-164-005-11 | CERAMIC CHIP | 0.47uF | | 25V |
| | | < JACK > | | | |
| CN901 | 1-764-425-11 | JACK (ANTENNA) | | | |
| CN903 | 1-774-698-11 | JACK, PIN 2P (LINE OUT) | | | |
| | | < CONNECTOR > | | | |
| * CN902 | 1-506-993-11 | PIN, CONNECTOR (PC BOARD) 11P | | | |
| CN904 | 1-774-701-11 | PIN, CONNECTOR 16P | | | |
| CN905 | 1-764-422-11 | PLUG, CONNECTOR 12P | | | |
| | | < DIODE > | | | |
| D2 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D3 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D5 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D6 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D10 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D11 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D12 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D14 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D15 | 8-719-991-33 | DIODE | 1SS133T-77 (EXR-300) | | |
| D24 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D25 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D26 | 8-719-921-54 | DIODE | MTZJ-6.2B | | |
| D51 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D52 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D350 | 8-719-984-80 | DIODE | 1SR139-200 | | |
| D500 | 8-719-914-43 | DIODE | DAN202K | | |
| D600 | 8-719-049-38 | DIODE | 1N5404TU | | |
| D601 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D602 | 8-719-034-43 | DIODE | MA4056-H(QZ) | | |
| D603 | 8-719-110-14 | DIODE | RD9.1ES-B3 | | |
| D604 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D605 | 8-719-984-80 | DIODE | 1SR139-200 | | |
| D606 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| D607 | 8-719-921-63 | DIODE | MTZJ-7.5B | | |
| D608 | 8-719-991-33 | DIODE | 1SS133T-77 | | |
| | | < FUSE > | | | |
| F901 | 1-533-331-11 | FUSE (BLADE TYPE) (AUTO FUSE) 15A | | | |
| | | < IC > | | | |
| IC1 | 8-759-383-10 | IC | LC7233N-9206 | | |
| IC350 | 8-759-924-46 | IC | BA4560F | | |
| IC450 | 8-759-330-62 | IC | LC75383ED | | |
| IC500 | 8-759-369-42 | IC | HA13153 | | |
| | | < COIL > | | | |
| L1 | 1-410-513-11 | INDUCTOR | 22uH | | |
| L4 | 1-410-513-11 | INDUCTOR | 22uH | | |
| L5 | 1-408-405-00 | INDUCTOR | 4.7uH | | |
| L6 | 1-410-513-11 | INDUCTOR | 22uH | | |
| L601 | 1-411-669-11 | COIL, CHOKE | | | |
| | | < TRANSISTOR > | | | |
| Q1 | 8-729-901-01 | TRANSISTOR | DTC144EK | | |
| Q2 | 8-729-901-01 | TRANSISTOR | DTC144EK | | |
| Q3 | 8-729-901-01 | TRANSISTOR | DTC144EK | | |
| Q5 | 8-729-902-99 | TRANSISTOR | DTC114TK | | |
| Q8 | 8-729-901-01 | TRANSISTOR | DTC144EK | | |
| Q9 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q10 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| Q11 | 8-729-901-97 | TRANSISTOR | 2SA1036K-Q | | |
| Q12 | 8-729-901-00 | TRANSISTOR | DTC124EK | | |
| Q13 | 8-729-216-22 | TRANSISTOR | 2SA1162-G | | |
| Q14 | 8-729-901-00 | TRANSISTOR | DTC124EK | | |
| Q15 | 8-729-901-00 | TRANSISTOR | DTC124EK | | |
| Q350 | 8-729-205-94 | TRANSISTOR | 2SA1428-O | | |
| Q351 | 8-729-900-53 | TRANSISTOR | DTC114EK | | |
| Q500 | 8-729-920-21 | TRANSISTOR | DTC314TKH04 | | |
| Q501 | 8-729-920-21 | TRANSISTOR | DTC314TKH04 | | |
| Q502 | 8-729-920-21 | TRANSISTOR | DTC314TKH04 | | |
| Q503 | 8-729-920-21 | TRANSISTOR | DTC314TKH04 | | |
| Q504 | 8-729-900-51 | TRANSISTOR | DTA114TK | | |
| Q505 | 8-729-901-00 | TRANSISTOR | DTC124EK | | |
| Q506 | 8-729-216-22 | TRANSISTOR | 2SA1162-G | | |
| Q507 | 8-729-901-06 | TRANSISTOR | DTA144EK | | |
| Q600 | 8-729-205-97 | TRANSISTOR | 2SC3668-Y | | |
| Q601 | 8-729-209-15 | TRANSISTOR | 2SD2012 | | |
| Q602 | 8-729-216-22 | TRANSISTOR | 2SA1162-G | | |
| Q603 | 8-729-901-97 | TRANSISTOR | 2SA1036K-Q | | |
| Q604 | 8-729-900-53 | TRANSISTOR | DTC114EK | | |
| Q605 | 8-729-205-94 | TRANSISTOR | 2SA1428-O | | |
| Q606 | 8-729-216-22 | TRANSISTOR | 2SA1162-G | | |
| Q607 | 8-729-902-99 | TRANSISTOR | DTC114TK | | |
| Q610 | 8-729-901-06 | TRANSISTOR | DTA144EK | | |
| Q611 | 8-729-120-28 | TRANSISTOR | 2SC1623-L5L6 | | |
| | | < RESISTOR > | | | |
| R2 | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R3 | 1-247-895-00 | CARBON | 470K | 5% | 1/4W |

| Ref.No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R4-6 | | | | | |
| | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R7 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R8 | 1-247-867-11 | CARBON | 33K | 5% | 1/4W |
| R9-12 | | | | | |
| | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R15 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R16 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R17 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R18 | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R19 | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R20-23 | | | | | |
| | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R24 | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R25 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R26 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R27-29 | | | | | |
| | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R30 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W |
| R31 | 1-208-806-11 | METAL GLAZE | 10K | 1% | 1/10W |
| R32 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R33 | 1-216-198-00 | METAL CHIP | 1K | 5% | 1/8W |
| R34 | 1-216-198-00 | METAL CHIP | 1K | 5% | 1/8W |
| R35-38 | | | | | |
| | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R39 | 1-216-113-00 | METAL CHIP | 470K | 5% | 1/10W |
| R40 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R41 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R42 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R44 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R45 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R48 | 1-216-069-11 | METAL GLAZE | 6.8K | 5% | 1/10W |
| R49 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R50 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W |
| R51 | 1-216-090-00 | METAL CHIP | 51K | 5% | 1/10W |
| R54 | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R55 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R56 | 1-216-198-00 | METAL CHIP | 1K | 5% | 1/8W |
| R57 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R58 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R59 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R60 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R61 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R62 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R67 | 1-247-879-11 | CARBON | 100K | 5% | 1/4W |
| R68 | 1-247-867-11 | CARBON | 33K | 5% | 1/4W |
| R70 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R71 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R72 | 1-216-067-00 | METAL CHIP | 5.6K | 5% | 1/10W |
| R78 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W |

| Ref.No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R79 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W |
| R80 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R81 | 1-216-061-00 | METAL CHIP | 3.3K | 5% | 1/10W |
| R82 | 1-216-075-00 | METAL CHIP | 12K | 5% | 1/10W |
| R83 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R84 | 1-247-863-11 | CARBON | 22K | 5% | 1/4W |
| R85 | 1-216-295-00 | CONDUCTOR CHIP | | | (2012) |
| R350 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W |
| R352 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R353 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R354 | 1-216-164-00 | METAL GLAZE | 39 | 5% | 1/8W |
| R355 | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W |
| R356 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W |
| R357 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R358 | 1-247-855-11 | CARBON | 10K | 5% | 1/4W |
| R359 | 1-216-025-00 | METAL CHIP | 100 | 5% | 1/10W |
| R360 | 1-216-115-00 | METAL CHIP | 560K | 5% | 1/10W |
| R361 | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W |
| R362 | 1-216-015-00 | METAL CHIP | 39 | 5% | 1/10W |
| R363 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R450 | 1-216-150-00 | METAL GLAZE | 10 | 5% | 1/8W |
| R451 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R452 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R500-503 | | | | | |
| | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R504-506 | | | | | |
| | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W |
| R507 | 1-216-198-00 | METAL CHIP | 1K | 5% | 1/8W |
| R508-511 | | | | | |
| | 1-216-224-00 | METAL GLAZE | 12K | 5% | 1/8W |
| R512-515 | | | | | |
| | 1-216-077-00 | METAL CHIP | 15K | 5% | 1/10W |
| R516-519 | | | | | |
| | 1-216-129-00 | METAL CHIP | 2.2M | 5% | 1/10W |
| R521 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R522 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R531 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R533 | 1-216-254-00 | METAL GLAZE | 220K | 5% | 1/8W |
| R534 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R535 | 1-216-071-00 | METAL CHIP | 8.2K | 5% | 1/10W |
| R536 | 1-216-295-00 | CONDUCTOR CHIP | | | (2012) |
| R537 | 1-216-295-00 | CONDUCTOR CHIP | | | (2012) |
| R600 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R601 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W |
| R602 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R603 | 1-247-807-11 | CARBON | 100 | 5% | 1/4W |
| R604 | 1-216-041-11 | METAL GLAZE | 470 | 5% | 1/10W |
| R605 | 1-216-373-11 | METAL OXIDE | 2.2 | 5% | 2W F |
| R606 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R607 | 1-247-835-11 | CARBON | 1.5K | 5% | 1/4W |

**MAIN** **SWITCH**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R608 | 1-216-065-00 | METAL CHIP | 4.7K | 5% | 1/10W |
| R609 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R610 | 1-247-835-11 | CARBON | 1.5K | 5% | 1/4W |
| R611 | 1-216-357-00 | METAL OXIDE | 4.7 | 5% | 1W F |
| R613 | 1-216-089-00 | METAL CHIP | 47K | 5% | 1/10W |
| R614 | 1-216-097-00 | METAL CHIP | 100K | 5% | 1/10W |
| R615 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R616 | 1-216-230-00 | METAL GLAZE | 22K | 5% | 1/8W |
| R618 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R619 | 1-247-839-11 | CARBON | 2.2K | 5% | 1/4W |
| | | < TUNER > | | | |
| TU1 | 1-693-336-11 | TUNER UNIT | | | |
| | | < VIBRATOR > | | | |
| X1 | 1-567-713-11 | VIBRATOR, CRYSTAL (4.5MHz) | | | |

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SWITCH BOARD
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| | | | | | |
|---|---|---|---|---|---|
| * | 3-922-509-01 | PLATE (LCD), LIGHT GUIDE | | | |
| * | 3-922-522-01 | PLATE (LCD), GROUND | | | |
| * | 3-934-818-01 | REFLECTOR | | | |
| * | 3-934-819-01 | INSULATOR | | | |
| | | < CAPACITOR > | | | |
| C901 | 1-163-007-11 | CERAMIC CHIP | 680PF | 10% | 50V |
| C902 | 1-162-637-11 | CERAMIC CHIP | 0.47uF | | 16V |
| C903 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C904 | 1-162-637-11 | CERAMIC CHIP | 0.47uF | | 16V |
| C905 | 1-162-637-11 | CERAMIC CHIP | 0.47uF | | 16V |
| | | < CONNECTOR > | | | |
| CN906 | 1-764-423-11 | PIN, CONNECTOR 12P | | | |
| | | < DIODE > | | | |
| D900 | 8-719-977-03 | DIODE DTZ5.6B | | | |
| D901 | 8-719-105-99 | DIODE RD6.2M-B1 | | | |
| D902 | 8-719-105-99 | DIODE RD6.2M-B1 | | | |
| D903 | 8-719-105-99 | DIODE RD6.2M-B1 | | | |
| D904 | 8-719-988-62 | DIODE 1SS355 | | | |
| | | < IC > | | | |
| IC900 | 8-759-341-77 | IC LC75822E | | | |
| | | < JUMPER RESISTOR > | | | |
| JR900 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR901 | 1-216-295-00 | CONDUCTOR CHIP | (2012) | | (XR-3500MK2) |
| JR901 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| JR902-904 | | | | | |
| | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR905 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| JR906 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR907 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR908 | 1-216-295-00 | CONDUCTOR CHIP | (2012) | | (EXR-300) |
| JR908 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (XR-3500MK2) |
| JR909 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR910 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | |
| JR911-915 | | | | | |
| | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| JR916 | 1-216-295-00 | CONDUCTOR CHIP | (2012) | | (EXR-300) |
| JR917-919 | | | | | |
| | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| JR922 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| | | < LIQUID CRYSTAL DISPLAY > | | | |
| LCD900 | 1-801-228-11 | DISPLAY PANEL, LIQUID CRYSTAL | | | |
| | | < PILOT LAMP > | | | |
| PL900 | 1-517-534-11 | LAMP, PILOT | | | |
| PL901 | 1-517-534-11 | LAMP, PILOT | | | |
| PL902 | 1-517-534-11 | LAMP, PILOT | | | |
| PL903 | 1-517-534-11 | LAMP, PILOT | | | |
| | | < RESISTOR > | | | |
| R901 | 1-216-091-00 | METAL CHIP | 56K | 5% | 1/10W |
| R902 | 1-216-113-00 | METAL CHIP | 470K | 5% | 1/10W |
| R903 | 1-216-202-00 | METAL GLAZE | 1.5K | 5% | 1/8W |
| R904 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| R905 | 1-216-211-00 | METAL GLAZE | 3.6K | 5% | 1/8W |
| R906 | 1-216-211-00 | METAL GLAZE | 3.6K | 5% | 1/8W |
| R907 | 1-216-208-00 | METAL GLAZE | 2.7K | 5% | 1/8W (XR-3500MK2) |
| R908 | 1-216-203-00 | METAL GLAZE | 1.6K | 5% | 1/8W (XR-3500MK2) |
| R909 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (EXR-300) |
| R910-912 | | | | | |
| | 1-216-049-11 | METAL GLAZE | 1K | 5% | 1/10W (EXR-300) |
| R913 | 1-216-296-00 | CONDUCTOR CHIP | (3216) | | (XR-3500MK2) |
| | | < SWITCH > | | | |
| S900 | 1-572-704-21 | SWITCH, KEY BOARD (TUNER/A.MEM) | | | |
| S901 | 1-572-704-21 | SWITCH, KEY BOARD (SEL) | | | |
| S902 | 1-572-704-21 | SWITCH, KEY BOARD (+ (LEVEL)) | | | |
| S903 | 1-572-704-21 | SWITCH, KEY BOARD (- (LEVEL)) | | | |
| S904 | 1-572-704-21 | SWITCH, KEY BOARD (DSPL) | | | |

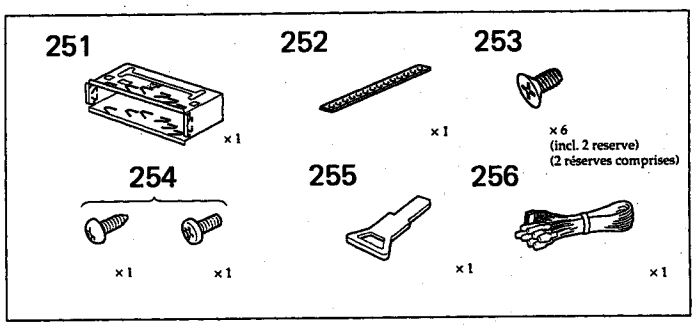
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| S905 | 1-572-704-21 | SWITCH, KEY BOARD (- (SEEK/MANU)) | |
| S906 | 1-572-704-21 | SWITCH, KEY BOARD (1) (EXR-300) | |
| S906 | 1-572-704-21 | SWITCH, KEY BOARD (1/ATA) (XR-3500MK2) | |
| S907 | 1-572-704-21 | SWITCH, KEY BOARD (2) (XR-3500MK2) | |
| S908 | 1-572-704-21 | SWITCH, KEY BOARD (3) (XR-3500MK2) | |
| S909 | 1-572-704-21 | SWITCH, KEY BOARD (4) | |
| S910 | 1-572-704-21 | SWITCH, KEY BOARD (6) (XR-3500MK2) | |
| S911 | 1-572-704-21 | SWITCH, KEY BOARD (LOUD) (XR-3500MK2) | |
| S912 | 1-572-704-21 | SWITCH, KEY BOARD (5) (XR-3500MK2) | |
| S913 | 1-572-704-21 | SWITCH, KEY BOARD (SENS) (XR-3500MK2) | |
| S914 | 1-572-704-21 | SWITCH, KEY BOARD (OFF) | |
| S915 | 1-572-704-21 | SWITCH, KEY BOARD (+ (SEEK/MANU)) | |
| | | SWITCH SUB BOARD (EXR-300) | |
| | | < JUMPER RESISTOR > | |
| JR920 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | (EXR-300) |
| JR921 | 1-216-296-00 | CONDUCTOR, CHIP (3216) | (EXR-300) |
| | | < RESISTOR > | |
| R907 | 1-216-208-00 | METAL GLAZE 2.7K 5% 1/8W | (EXR-300) |
| R908 | 1-216-203-00 | METAL GLAZE 1.6K 5% 1/8W | (EXR-300) |
| | | < SWITCH > | |
| S907 | 1-572-704-21 | SWITCH, KEY BOARD (2) (EXR-300) | |
| S908 | 1-572-704-21 | SWITCH, KEY BOARD (3) (EXR-300) | |
| S910 | 1-572-704-21 | SWITCH, KEY BOARD (6) (EXR-300) | |
| S911 | 1-572-704-21 | SWITCH, KEY BOARD (LOUD) (EXR-300) | |
| S912 | 1-572-704-21 | SWITCH, KEY BOARD (5) (EXR-300) | |
| S913 | 1-572-704-21 | SWITCH, KEY BOARD (SENS) (EXR-300) | |
| | | MISCELLANEOUS | |
| 14 | 1-776-207-11 | CORD (WITH CONNECTOR) | |
| F901 | 1-532-982-11 | FUSE (BLADE TYPE) (AUTO FUSE) 15A | |
| HP701 | 1-543-717-11 | HEAD, MAGNETIC (PLAYBACK) | |
| M701 | X-3364-496-1 | MOTOR ASSY (REEL/CAPSTAN) | |
| S701 | 1-692-502-11 | SWITCH, SLIDE (DIRECTION) | |
| S702 | 1-692-065-11 | SWITCH, LEAF (MUTE) | |
| S703 | 1-554-790-21 | SWITCH, POWER (TAPE DET) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ACCESSORIES & PACKING MATERIALS | |
| | 3-810-725-51 | MANUAL, INSTRUCTION (ENGLISH) | (XR-3500MK2) |
| | 3-810-725-61 | MANUAL, INSTRUCTION (FRENCH) | (XR-3500MK2:Canadian) |
| | 3-810-726-51 | MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) | (XR-3500MK2) |
| | 3-810-729-11 | MANUAL, INSTRUCTION (ENGLISH) | (EXR-300) |
| | 3-810-729-21 | MANUAL, INSTRUCTION (FRENCH) | (EXR-300:Canadian) |
| | 3-810-730-11 | MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) | (EXR-300) |
| | X-3367-692-3 | CASE ASSY | |

## HARDWARE LIST

| | | |
|---|---|---|
| #1 | 7-685-106-19 | SCREW +P 2X10 TYPE2 NON-SLIT |
| #2 | 7-621-772-10 | SCREW +B 2X4 |
| #3 | 7-621-770-XX | SCREW +PTT 2.6X8 (S) |
| #4 | 7-621-775-08 | SCREW +P 2.6X3 |
| #5 | 7-627-553-88 | SCREW, PRECISION +P 2X7 |
| #6 | 7-621-255-15 | SCREW +P 2X3 |
| #7 | 7-621-255-20 | SCREW +P 2X4 |
| #8 | 7-621-255-25 | SCREW +PTT 2X4 (S) |
| #9 | 7-621-555-10 | SCREW +K 2X3 |
| #10 | 7-621-591-00 | SCREW +K 2X4 |
| #11 | 7-624-102-04 | STOP RING 1.5, TYPE -E |
| #12 | 7-624-104-04 | STOP RING 2.0, TYPE -E |
| #13 | 7-624-118-01 | RING, RETAINING E-2.5 |
| #14 | 7-621-773-95 | SCREW +B 2.6X6 |
| #15 | 7-621-770-67 | SCREW +B 2.6X6 |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | MOUNTING HARDWARE | |
| | | ********** | |
| 251 | X-3367-691-1 | FRAME ASSY, FITTING | |
| 252 | 3-310-655-01 | SUPPORT (ND), FITTING | |
| 253 | 7-682-560-04 | SCREW +P 4X6 | |
| 254 | X-3368-725-1 | SCREW ASSY, FITTING | |
| 255 | 3-909-097-01 | KEY | |
| 256 | 1-776-207-11 | CORD (WITH CONNECTOR) | |

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